INTER-PROVINCIAL MIGRATION IN IRAN WITH SPECIAL REFERENCE TO EAST AZARBAYEJAN OSTAN

by

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ABSTRACT

The objective of this study is to investigate the impact of migration on the East Azarbayejan Ostan, setting the experience of this province in the wider context of inter-provincial migration in Iran as a whole. After discussing the problems of definition and the identification of types of migration, some important migration theories are examined followed by examination of patterns of inter-Ostan migration in Iran. In order to assess the general progress of urbanization at the Ostan level, differential urban population growth among Ostans is examined. Further analysis of the role of migration in the growth of population in Iranian cities indicates that internal migration, particularly rural-urban migration plays a great role in the growth of cities.

Examining the patterns of inter-Shahrestan migration in East Azarbayejan Ostan, special emphasis is placed on the study of the phenomenon of hashia neshini (squatter settlements) in Tabriz, the Ostan's capital.

The study concludes by reviewing the findings and by suggesting some points relating to the implications of rural-urban migration and urbanization in Iran.

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CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

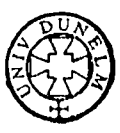
One of the components of the dynamics of population is migration. The population of an area may change in size and/or composition by an inflow or an outflow of migrants.

The effect of internal migration in Iran is particularly visible in the rapid increase of the urban population. It has produced changes in the urban/rural distribution of the population. Furthermore, internal migration is the most significant factor in inter-regional population shifts. An obvious reflection of these shifts is the high rate of unemployment, underemployment and swollen employment in the tertiary sector of the economy.

In Iran, internal migration acts as a factor in transferring labour force from rural areas to industrial centres which, in turn, affectsthe process of economic development.

This study focuses on an examination of the inter-Ostan migration in Iran as well as inter-Shahrestan migration in East Azarbayejan Ostan, using data from the censuses of 1956, 1966 and 1976.

It should be noted that, in the case of Iran, data for the study of internal migration movements are confined almost enitrely to information on the individual's place of birth,thus restricting our study to a consideration of lifetime migration. Furthermore, the Shahrestan, a territorial unit roughly equivalent in size to a county is the smallest unit for which these place-of-birth data are available. Thus any population movement within a Shahrestan is not regarded as migration, and therefore has not been recorded. But those who crossed the Shahrestan boundaries are regarded as migrants. Iran is divided into



Ostans and each Ostan consists of several Shahrestans. Such administrative divisions in Iran enable one to analyse migration data at both the Shahrestan and Ostan level, while examination of intra-Shahrestan migration is not possible. Also direct measures of rural-urban migration are not possible.

The study is divided into 8 chapters.

Chapter 1 discusses some of the theoretical and conceptual problems involved in a study of this sort, which include those of defining the terms "migrant" and "migration" and of identifying and measuring migration flows. In addition, it discusses the more important migration theories and the attempts which have been made to classify migration movements and examines the progress which has been made in the study of migration in the less-developed countries in general and in Iran in particular. Chapter 2 presents the available data on recent inter-provincial migration in Iran by means of the analysis of matrices based on the censuses of 1956, 1966 and 1976. Chapter 2 also examines the age and sex structure of inter-provincial migrants based on the 1966 and 1976 birth place data.

Chapter 3 shifts the focus to aspects of urbanization in Iran and attempts to explain the effects of internal migration on the population of the country's 42 cities by examining net migration to those cities during the two inter-censal periods 1956-66 and 1966-76. This chapter places special emphasis on the position of Tehran in Iran's urbanization process.

Chapter 4 undertakes a brief study of the economic, physical and environmental factors operating in the study area - the East Azarbayejan Ostan - as a fundamental background to the study of

population and migration movements in the Ostan.

Chapter 5 deals with the major aspect of the population geography of the Ostan - its numbers, distribution, density, and division between rural and urban areas.

In Chapter 6 the patterns of movement within the Ostan are examined at the Shahrestan level, using data from the censuses of 1956 and 1966. In addition, an attempt is made to examine the age and sex structure of the inter-Shahrestan migrants based on the 1966, 1976 data.

Chapter 7 examines the phenomenon of hashiah neshini (squatter settlements) in Tabriz, the capital of East Azarbayejan Ostan, using the result of a sample survey of 1,275 squatter households carried out in 1982.

Chapter 8 presents an overview of the findings in a summary form, along with some suggestions.

CHAPTER 1

MIGRATION THEORIES

1.1 Definitions

Providing a scientific definition of the core notions in any field of study is of a fundamental importance. In fact it is the first and the most significant step to start any method of research in a given field of study. Compared with the other social sciences, especially with the various fields of population studies such as fertility and mortality, there has been little concensus among scholars in terms of defining 'migration'.

Nowadays, the complexity of human activities and the accelerating pace of industrialization and modernization of societies have brought about significant and rapid changes in the patterns of migration. The increasing rate of population re-distribution along with various socio-economic features of nations and numerous other factors involved in the mobility of man all have given rise to a special situation in which it is problematic, if not impossible, to provide a comprehensive definition of 'migration'.

In terms of the nature of the concept of migration, Kenneth C. W. Kammeyer (1972) suggests, "if popular conceptions about migration are more misleading than helpful, then careful attention must be given to the essential elements of the concept and to the dimensions that characterize different types of migration." White and Woods (1980) have discussed the complexity and partiality of the definition of 'migration'. In the form of a simple concept, the definition of 'migration' is straightforward; in operational terms any workable definition is likely to be both complex and only partial. White and Woods (1980) have noted that the geographers' simple definition of

'migration', as a change in the place of residence, is not very different from the general view and the dictionary definition of the verb 'to migrate' being to 'move' from one place (country, town, house) to another.

Lee (1966) defines 'migration' as a permanent or semi-permanent change of residence. In Lee's definition no restriction is placed upon the distance of the move or upon the voluntary or involuntary nature of the act, and no distinction is made between external and internal migration. Lee's definition seems to be too broad to be used in more specific studies related to various types of migration. Indeed, apart from some general and broad definitions, due to variations in type, an appropriate definition seems to be necessary for each type of migration.

The definition of migration suggested by Kenneth C.W.Kammeyer, (1972) attempts to make distinction between a 'mover' and a 'migrant'. He writes that migration is the movement of individuals or groups, who have the intention of remaining in the new place for some substantial period of time. He adds that some definitions include the provision that the move must be from one political or geographical unit to another. This provision makes it possible to distinguish between a 'mover' and a 'migrant'.

Compared with some definitions of migration suggested by various scholars with different research interests or personal views, the definitions and terms included in Methods of Measuring Internal Migration, Manual VI, United Nations, 1970 on 'migration' seem to be both reasonable and rational. Migration is defined as a move from one migration-defining area to another (or a move of some specified minimum distance) which is made during a given migration interval and which

involves a change of residence.

In terms of migration-defining area, under conventional statistical conditions that customarily prevail - the census or the survey - results are necessarily tabulated for the administrative or political units into which a country is divided. A migration is then operationally defined as a change of residence from one civil division to another.

The interval may be definite, e.g. one year, five years, ten years, the intercensal period, or it may be indefinite, e.g. the lifetime of population alive at a given date.

1.2 Types of Migration

The extreme diversity of migrations in cause, duration, distance, direction, volume, velocity, selectivity and organization prohibits simple classification. The most commonly used typology of migration is the distinction between internal and international migration. Such a simple distinction alone can not satisfy geographers who are interested not merely in numerical gains and losses due to migration and their demographic, social and economic effects, but also in environmental influences upon migration streams and consequences in areas of departure and destination. One of the most significant classification systemswas developed by Petersen (1958). In his classification he used a variety of criteria such as the distinction between 'conservative migration' and 'innovative migration'. Conservative migration occurs when a person moves from one place to another in order to retain his existing way of life. Innovative migration on the other hand is undertaken in order to change the way of life. Petersen's typology of migration includes the following classes:

1. Primitive Migration : This type of migration occurs when people are unable to cope with natural or ecological forces and move in order to survive.

2. Forced or Impelled Migration : This type of migration is characterized by population movement which is forced by the state, or some other political or economic power such as expulsion by the government and slave trade.

3. Free Migration : Free migration occurs when individuals on their own initiative actively seek out new homes.

4. Mass Migration: In this type the movement is more a group pattern than a matter of individual choice.

In terms of typology and classification of migration, Kosinski and Prothero (1974) suggest a multidimensional matrix with some cells empty and some occupied by distinguishable types. They further note that the dimensions of such a matrix would be designated by various elements. (Table 1.1).

Explanation of the methodological problems dealing with the typology and classification of migration (White and Woods, 1980) can be considered as an invaluable and most recently developed discussion in the literature. Considering migration as a multi-dimensional phenomenon, they have pointed out a number of means and methods which facilitate the classification of migration. Pointing out some major factors such as the distance travelled, time-period over which migration is effective, basis of the environments of origin and destination, reasons of migration, and the attributes of the migrants, White and Woods (1980) have placed a special emphasis on the geographical impact of migration.

Table 1.1 : Elements of Migration

Factors involved in migration	Types
1. Time	Temporary, permanent
2. Distance	Long, short
3. Boundaries crossed	Internal, external
4. Areal units involved	Between communities, counties, states
5. Decision-making	Voluntary, impelled, forced
6. Numbers involved	Individual, mass
7. Social organization of migration	Sponsored, free
8. Causes	Economic, non-economic
9. Aims	Conservative, innovative

Source : Kosinski, L.A. and Prothero, R.M. (1974), Introduction :The Study of Migration, in People on the Move, Kosinski, L.A. and Prothero, R.M. (eds.), pp.7-8.

Whatever the application of the definition, typology and classification of migration, it is the most significant point for developing a theory of migration as well as a starting point for any migration study.

1.3 Migration Theories

In the discussion dealing with the various aspects of theories which can be considered as one of the most substantial part of his book, Harvey, D. (1976) explains the distinction between natural sciences and social sciences in terms of theory formulation. In order to show the problems of applicability of the theories relating to social sciences at certain times and in certain societies, Harvey has chosen migration as an example. He writes :"Theories of diffusion or migration, for example, may be applicable only at certain times and in certain societies." He goes on to say, "In physics - the discipline which has provided the model for 'scientific' explanation - this problem does not arise."

The problems of theory formulation in social sciences, particularly in a dynamic and ever changing phenomenon such as population, can be understood very clearly from Harvey's discussion. However, it does not mean that applicable theories in population studies are non-existent, but rather that established theories are not complete in the scientific sense and need further manipulation, as new elements in a given field keep on emerging all the time. The insufficiency of established migration theories may be explained in terms of the fact that the existing theories have been developed by scholars with different points of view. In consequence, migration theories developed by geographers differ substantially from those developed by demographers and economists.

The most long-standing theory of migration is the one advanced by Ravenstein (1885). His ideas, referred to as the "Laws of Migration", are based on the assumption of rational behaviour. He noted that migration tended to flow from the rural place toward the urban place. Ravenstein's theory suggested that the economic motive was the primary cause of migration. Ravenstein included five explicit and two implicit statements concerning the pattern and distance of migration, migratory streams, migration motives and characteristics of migrants.

Ravenstein's "Laws of migration" may be outlined as follows:

1. The majority of migrants go only a short distance
2. Migration proceeds, step by step
3. Migrants going long distances, generally go by reference to one of the great centres of commerce or industry
4. Each current of migration produces a compensating counter-current
5. The natives of towns are less migratory than those of rural areas
6. Females are more migratory than males within their country of birth, but males more frequently venture beyond
7. Most migrants are adults - families rarely migrate out of their country of birth.
8. Large towns grow more by migration than by natural increase
9. Migration increases in volume as industries and commerce develop and transport improves.
10. The major direction of migration is from the agricultural areas to the centres of industry and commerce.
11. The major causes of migration are economic.

According to Lee (1966), perhaps the best known of recent theories of migration is Stouffer's theory of intervening opportunities. Stouffer asserted that the number of persons going a given distance is directly proportional to the number of intervening opportunities. The key assumption of the theory was that, in moving from one place to another, a person would not pass over opportunities, but would move only far enough to realize the objective being sought. Despite being a sociologist the principal elements of Stouffer's Theory and model such as population size, population density and geographic distance, fall quite naturally into the geographical-ecological domain.

The theory advanced by Lee (1966) consists of very general factors to serve as the basis for a series of migration hypotheses. He has summarized these factors under four headings as follows:

1. Factors associated with the area of origin.
2. Factors associated with the area of destination.
3. Intervening obstacles.
4. Personal factors.

On the basis of these four factors, Lee developed a series of hypotheses about the volume of migration under varying conditions, the development of stream and counterstream and the characteristics of migrants. These hypotheses may be outlined as follows:

<u>On the volume of migration</u>

1. The volume of migration within a given territory varies with the degree of diversity in areas included in that territory.
2. The volume of migration varies with the diversity of people.
3. The volume of migration is related to the difficulty of surmounting the intervening obstacles such as distance between origin and destination and cost of transportation.

4. The volume of migration varies with fluctuations in economy.
5. Unless severe checks are imposed, both volume and rate of migration tend to increase with time.
6. The volume and rate of migration vary with state of progress in a country or in an area.

On the stream and counterstream

1. Migration tends to take place largely within well-defined streams.
2. For every major migration stream a counterstream develops.
3. The efficiency of stream is high if the major factors in the development of a migration-stream were minus factors at origin.
4. The efficiency of stream and counterstream tends to be low if origin and destination are similar.
5. The efficiency of migration streams will be high if the intervening obstacles are great.
6. The efficiency of a migration stream varies with economic conditions, being high in prosperous times and low in times of depression.

On the characteristics of migrants

1. Migration is selective.
2. Migrants responding primarily to plus factors at destination tend to be positively selective.
3. Migrants responding primarily to minus factors at origin tend to be negatively selective; or where the minus factors are overwhelming to entire population groups, they may not be selected at all.

4. Taking all migrants together, selection tends to be bi-modal.

5. The degree of positive selection increases with the difficulty of the intervening obstacles.

6. The heightened propensity to migrate at certain stages of the life cycle is important in the selection of migrants.

7. The characteristics of migrants tend to be intermediate between the characteristics of the population at origin and the population at destination. For example, education of migrants from rural areas while greater than that of non-migrants at origin, is less than that of the population at destination.

These hypotheses provide a general framework for research and are stated in such a way that they can be tested with current data. It should be emphasized that applicability of any theory and hypothesis depends greatly on the availability of data. No need to say that the quality and the nature of collected data differ from one country to another. In consequence, proper application of any migration theory requires a set of reliable and carefully collected migration data.

As will be discussed, almost all developing countries suffer from the lack of such information and data. As a result, most of the established migration theories can be applied as far as the available data permit.

Reviewing various migration theories and hypotheses established in recent years shows that Zelinsky's (1971) hypothesis of the mobility transition is one of the most elaborately developed hypotheses in the literature. This hypothesis suggests that the mobility of a population experiences a transition in its character similar to the transitions in the mortality and fertility characteristics

of developing societies. In his hypothesis Zelinsky has suggested the temporal sequence of a five-stage mobility transition parallel with a five-stage vital transition. According to his five mobility transitional phases, Zelinsky classifies societies as follows:

1. The Pre-modern Traditional Society
2. The Early Transitional Society
3. The Late Transitional Society
4. The Advanced Society
5. A Future Superadvanced Society

Discussing the five suggested phases of the mobility transition, Zelinsky has placed an especial emphasis on the temporal trends and spatial patterns during phase 2. He writes: "rapid growth in rural population, changes in agricultural landholding and production systems, and a perceived lack of local economic opportunity impelled mounting numbers of individuals to confront a series of choices."

According to the hypothesis of mobility transition, the rate of population movement increases over time and that it is higher in the economically advanced than the developing countries. Although the role of migration in pre-industrial countries has received less attention in this hypothesis, however, it is clear that residential mobility, particularly in its long-distance form, increases during the period of industrialization.

On the applicability of Zelinsky's hypothesis, and also on the reasons that this hypothesis has not been widely tested, Findlay (1980,9) writes, "one reason that the concept of the mobility transition has not been closely examined by migration analysts has been the practical difficulty of testing a hypothesis which refers to such a wide spectrum of types of population movement ranging from intra-city commuting patterns to international labour migration."

Discussing the problems of applicability of the hypothesis of the mobility transition,McGee (1977, 201) has criticized Zelinsky's model. He notes that Zelinsky's model suffers from the assumption that societies will necessarily pass through these various phases and will experience the same set of processes. He further emphasizes that, at least in demographic terms,none of these societies in the South and Southeast Asian region has the possibility of emigration as did the societies of Western Europe."

Although the hypothesis of the mobility transition is open to criticism, it provides a convenient set of generalized terms such as : 'rural-urban', 'inter-urban', 'suburban' and 'frontierward' migration in the literature which can be applied to most migration flows with some profits in terms of description.

1.4 Migration Studies in the Developing Countries

In developing countries migration has been a favourite topic of research in recent years. Special conditions of urbanization and migration in the developing countries offer an opportunity for testing existing migration theories.

Population movements are highly visible in developing countries, in part because of their magnitude and in part because of their impact on political sensitivities in urban areas. Two-thirds or more of the adults in many of large, expanding cities of the developing world are in-migrants, and their high fertility (due in part to their youthful age structure) means that the cities are growing very rapidly through combined effects of continued in-movement and natural growth.

In terms of objectives, methodological approaches and analysed

data, there are considerable differences among migration studies in the developing countries. The reasons why empirical knowledge on internal migration has developed so unevenly are various. Demographers have traditionally been interested in migration selectivity; anthropologists and sociologists have been concerned with the adaptation of migrants to new urban settings; geographers have been heavily concerned with the spatial aspects of population redistribution and economists have been more concerned with explaining the determinants of migration. Other questions, such as the impact of out-migration on the social-economic organization of rural communities and the implication of overall change in residential patterns for health, social services, and economic development, have been relatively ignored. Despite the serious problems of data reliability in many of the developing countries, a number of empirical studies on various aspects of internal migration have been carried out in recent years. Beals (1967) Greenwood (1969) and Sahota (1968) tested the economic migration theory or 'push-pull' hypothesis in selected countries of Africa and South America. The variables used in their models included population sizes and distances between areas of origin and destination, levels of urbanization at both ends of the migration stream and education level of migrants and non-migrants.

According to Beal's study of migration in Ghana, the propensity to migrate is directly related to income, population density and level of urbanization at the origin and destination. Greenwood (1969) found that in Egypt availability of education facilities at the origin acts as a hindrance, and at the destination acts as an attractive force. Using variables such as population density of origin, dispersion of income and the policy of industrial and employment decentralization, Sahota (1969) examined inter-state

migration in Brazil and found that migrants in Brazil respond strongly to income differences between areas of origin and destination.

Numerous studies deal with internal migration as a function of the socio-economic structure of the area of origin only,such as Phillips' (1959) Study of migration to Baghdad. Some scholars have taken a different approach by including the attributes of destination as a predictor of internal migration without giving consideration to the characteristics of origin. For example, in the study of migration and problems of development in Iran carried out by Hemmasi (1974) emphasis is placed on pull forces of urban places, particularly the capital city of Tehran.

One of the most comprehensive migration studies dealing with the developing countries, is that carried out by Masser and Gould (1975). Discussing the applicability of various models such as the system model of rural-urban migration, economic models, spatial interaction models and sequential models of migration processes in Tropical Africa, they have examined spatial patterns of inter-regional migration in Uganda. They found that the overall pattern of inter-regional migration in Uganda had some features in common with those of more developed countries in Europe and North America.

Masser and Gould used variables such as distance, population, income, urbanization and education, in the study of inter-regional migration in Uganda and came to the following main conclusions -

1. Increasing distance inhibits population movement.
2. Population size has been reflected in the volume of flow in terms of both the origin and the destination region.

3. Out-movement was likely to be inhibited in the case of regions with high average incomes and in-migrants were likely to be attracted to regions with high average incomes.

4. It was argued that a high level of urbanization stimulated migration in terms of both the origin and the destination, and the same has been the case for the education variable.

In general, the detailed case study of Uganda which has been of particular interest to geographical research can be considered as the first comprehensive spatial analysis of inter-regional migration in an African country.

The International Development Research Centre (1977) has published a Review on Social Change and Internal Migration based on the research findings from Africa, Asia and Latin America. This Review focuses heavily on development policy issues and related research implications with respect to migration and population distribution and examines these issues separately for Africa, Asia and Latin America. It also examines evidence on the determinants of migration, the characteristics of the migrants and some of the consequences of migration in Africa, Asia and Latin America in parallel. Thus it is possible for investigators interested primarily in one region to determine what is known on the topics that concern them for the other region.

The most recent study on migration in the developing countries is the one carried out by Zackariah and Conde (1981). In this study they have investigated international and internal migration in nine West African countries : Ghana, Liberia, Sierra Leone, Gambia,

Ivory Coast, Upper Volta, Mali, Senegal and Togo. Using the published and unpublished results of the 1970 series of population censuses in the nine selected West African countries, Zachariah and Conde have examined migration between countries of the West African region and within them, from one region to another and from rural to urban areas. They have also analysed the socio-economic characteristics of the migrants.

Explaining the spatial patterns of migration they found that the demographic characteristics of migrants in West African countries such as the sex ratios, dependency ratios were more or less similar to those found in other parts of the world. They also found that migrants included a relatively high proportion of young adults of working age and that short-distance migrants included more females than males. As in the case of many other migration studies concerning the developing countries, Zachariah and Conde's study reached the conclusion that, compared with developed countries,in most of the developing countries, rapid urbanization is more recent and that rural-urban migration is as important a component of urban growth as natural increase. The concentration of rural-urban migrants in a few larger cities is a common phenomenon in the developing countries. According to Zachariah and Conde in Ghana, 200,000 out of the total net gain of 226,000 in all urban areas was in Accra Region and in Togo 80 per cent of net rural-urban migration was directed to Lome, the capital city.

Over-urbanization, unemployment, underemployment and many other acute problems such as expansion of slums and squatter settlements and also the lack of social services in the principal cities of the developing countries can be considered as the immediate consequences of the increasing rate of rural-urban migration.

It should be added here that, in order to present an accurate picture of the implications of migration, migration analysts need to focus on the various geographical and socio-economic dimensions of the problems created by migration, particularly by rural-urban migration in developing countries. Moreover, as Findlay (1980) has mentioned, migration remains an intensely personal experience for the individuals in the trauma of movement to a new locus of employment or a new place. The migration analyst must not lose sight of this perspective on human movements if he wishes his research to be of value to 'people' and not merely to 'populations'.

1.5 Migration studies in Iran

Apart from some sporadic and rather general information on migration which has been included in studies dealing with the population of Iran, no empirical and comprehensive study of internal migration in the country took place before 1970. Due mainly to the lack of migration data and due partly to the fact that migration analysis to a great extent requires sufficient investigation together with substantial research interests, this important topic of research has been overlooked for many years in Iran.

It was not until recently that the Institute for Social Studies and Research and the Department of Demography were established (1959) in Tehran University. Based on the collected data in 1956 and 1966 censuses, various aspects of the population of Iran, including internal migration, were studied by the Institute. The study of 'The Internal Migration in Iran' which was carried out by Zanjani, H. (1970) can be considered as the first published research of the Institute in the field of migration. Using the 1966 birth place data Zanjani provided a very general view of the context of internal migration in Iran.

The first detailed study of migration in Iran was carried out by Hemmasi (1974). This study can be considered as the first step for developing an empirical approach in the analysis of internal migration in Iran. In order to examine the determinants of internal migration in Iran, Hemmasi has tested the 'pull, push' hypothesis, using variables concerning the 'push' factors of the origin and the 'pull' factors of destination. He found that, in Iran, migrants are strongly attracted to cities that are characterized by social, occupational and education facilities. He adds that,at Ostan level, migration occurs most often from an Ostan with lower economic opportunities to an Ostan with higher economic opportunities.

Although Hemmasi's study provides a general background for further research, as a predominantly quantitative approach it suffers from the lack of sufficient discussion dealing with the consequences and related problems of migration in Iran. Since he has used the 1956 administrative division of Iran (13 Ostans) his study fails to demonstrate the appropriate picture of the spatial patterns of Inter-Ostan migration, due mainly to the increase in the number of Ostans at the time of the 1966 census. In other words Hemmasi's study examines migration flows between 13 Ostans instead of 21. This problem has affected some other migration studies such as Hill's (1973) study on inter-provincial migration in Iran as well. Hill's study on internal migration in Iran has placed a special emphasis on the settlement pattern.

The principal contribution of Hill's study was the application of newly-developed demographic techniques to the analysis and estimation of basic demographic parameters for Iran by age and sex. As stated earlier, the problems stemming from substantial changes in Ostan boundaries in 1966 affected Hill's study in terms of illust-

rating inter-Ostan migration flows. For migrations areas Hill has chosen the 13 Ostans of 1956 and has adjusted the Ostan population of 1966 to the Ostans of 1956 by age and sex. Due to this adjustment the volume of inter-Ostan migration flows can not be explained and this affects the applicability of the findings of study in terms of demographic and socio-economic planning purposes in the newly established Ostans at the time of the 1966 census. Overall, in terms of technique, explanation, and methodological discussion Hill's study can be identified as an important stage in the scientific and analytical research on internal migration and settlement in Iran. Analysing various aspects of inter-Ostan migration, Hill found that besides the important factors such as contiguity, economic opportunity and distance to be travelled which influenced the direction of migration, other factors such as language, geographical terrain and climate played a role in determining migrant-flows in Iran.

In Iran,as elsewhere in developing countries, economic factors have played a remarkable role in population redistribution. To what extent these economic factors act as a stimulant for migrants in Iran, is the main objective of the study carried out by Shadman-Valavi (1974). This study attempts to explain the fact that the migrant's decision to move is in response to the expectations of employment opportunities both in the area of origin and destination.

According to general economic conditions, Shadman has divided Iran into three major migration areas, these being the Eastern part of Iran, Southern and South East, and North and North West of Iran. Using 1956 and 1966 census data he has made an attempt to demonstrate the characteristics of these three areas in terms of population interchange. From the geographical point of view, Shadman's study

fails to explain actual spatial patterns of migration in Iran. However, this study provides an overall picture of the economic conditions such as level of industrialization, employment opportunities and agricultural potential which affect the population redistribution in the three major study areas.

The most recent study on migration in Iran is that carried out by Kazemi (1980). Unlike previous migration studies, in this study emphasis is placed mainly on the political aspects of migration. Although Kazemi's study is not directly concerned with the revolution in Iran, he has broadly discussed the poor migrants' situation relating to the recent events in Iran. The study discusses the consequences of an important structural dislocation, developed under the old regime, and its impact on large numbers of poor peasants and their subsequent marginal life in the urban centres of Iran. The process of mobilization of segments of the politically passive poor migrants during the course of the revolution is also discussed to some extent in this study. Kazemi's study is based on the 1966 and 1976 census data, including information collected by filling in questionnaires in the five major migrant poor areas of South Tehran.

Kazemi has made an attempt to discuss the 'Theory of Marginality' in order to indicate the similarities between 'marginal man' and the 'poor migrant' who lives in the squatter settlements in Tehran or in other large cities of Iran. He writes, "The poor migrants are marginal in several interrelated areas : (1) they lead an economic life that allows them to earn only a bare subsistence income; (2) they live on the fringes of the city in marginal dwelling units with insecure rights of tenancy, often without water, electricity or other amenities of life; (3) they do not generally belong to associations or

political organizations and are non participants in the political arena; and (4) they have low status and do not enjoy any special social privileges."

Although Kazemi's study contains more recently published data, together with those collected during his field observations either by interviewing or by filling in questionnaires, it covers only a segment of migrants (squatters). Moreover, further emphasis on the discussions dealing with political aspects of migration overshadowed many other characteristics of migrants. Furthermore, some of the discussions dealing with the socio-economic aspects of migrants seem to be based more on his personal ideas than on the actual findings of the study.

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CHAPTER 2

INTERNAL MIGRATION IN IRAN

2.1 Introduction

The application of geographical method to the study of migrations necessitates an appraisal of the nature and arrangement of the areal units for which the appropriate data are available. In the case of Iran, all types of population statistics, including those of migration, are collected and published on the basis of administrative units. It follows that, in order to discuss inter-provincial migration in Iran, it is of fundamental importance to give a brief account of the administrative hierarchy of Iran, and also to evaluate the source and nature of migration data.

2.1.1 Administrative divisions of Iran

In 1937 a law was introduced whereby the country was divided into 10 Ostans* and 49 Shahrestans.** Each Shahrestan was divided into several Bakhshs (districts), and each Bakhsh into Dehestans (village groups), each Dahestan comprising several villages.

For the purpose of the first census (1956), Iran was divided into 13 Ostans (Figure 2.1) and 119 Shahrestans (Table 2.1). In the second census (1966), the country was divided into 13 Ostans, (provinces), 8 Farmandarikols*** (General Governorship), (Figure 2.2), and 158 Shahrestans, 463 Bakhshs and 1,554 Dehestans (Table 2.2).

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* An Ostan is a political-administrative division comparable to a province or state.

** A Shahrestan is an administrative unit under the jurisdiction of either a Farmandarikol or Ostan.

*** A Farmandarikol is an administrative unit smaller than a province (Ostan), but having the same administrative system as a province.

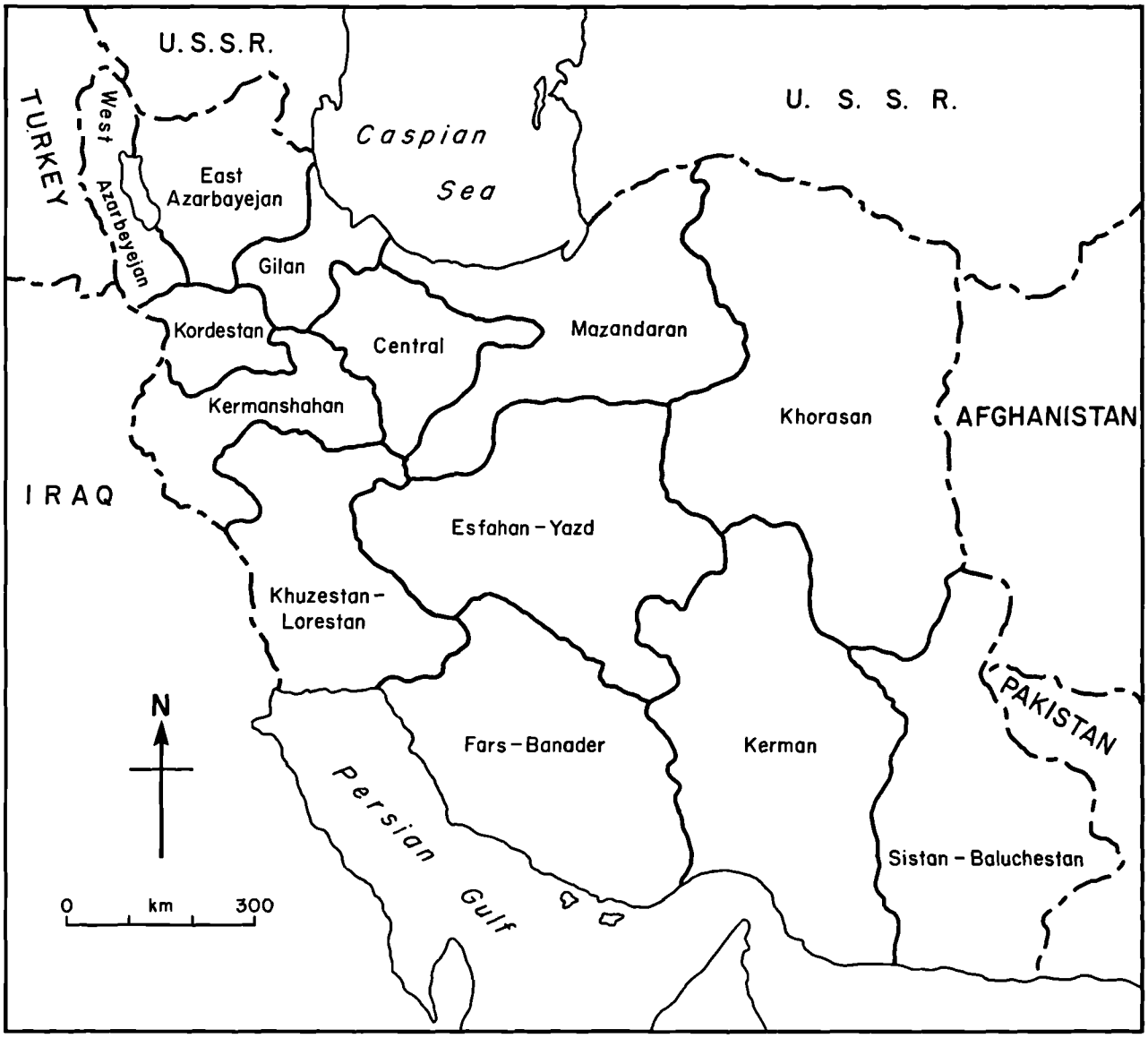

Figure 2.1 Iran: Census Divisions by Ostan, 1956

Table 2.1 : Area, Population and number of Shahrestans by Ostan, 1956

	Ostan	Area (sq. km.)	Population	No. of Shahrestans
1	Central	60,761	2,717,309	7
2	Gilan	48,624	1,629,699	7
3	Mazandaran	155,166	1,683,905	13
4	East Azarbayejan	73,682	2,142,270	11
5	West Azarbayejan	35,391	721,136	4
6	Kermanshahan	59,448	1,376,989	19
7	Kordestan	33,860	555,413	4
8	Khuzestan-Lorestan	117,712	2,068,503	14
9	Fars-Banader	148,668	1,320,614	13
10	Kerman	225,173	789,345	10
11	Khorasan	314,283	2,007,581	14
12	Esfahan-Yazd	197,400	1,513,581	8
13	Sistan-Baluchestan	177,832	428,363	5
	Total	1,648,000	18,954,704	119

Source: First National Census of Population and Housing, 1956, Vol.1

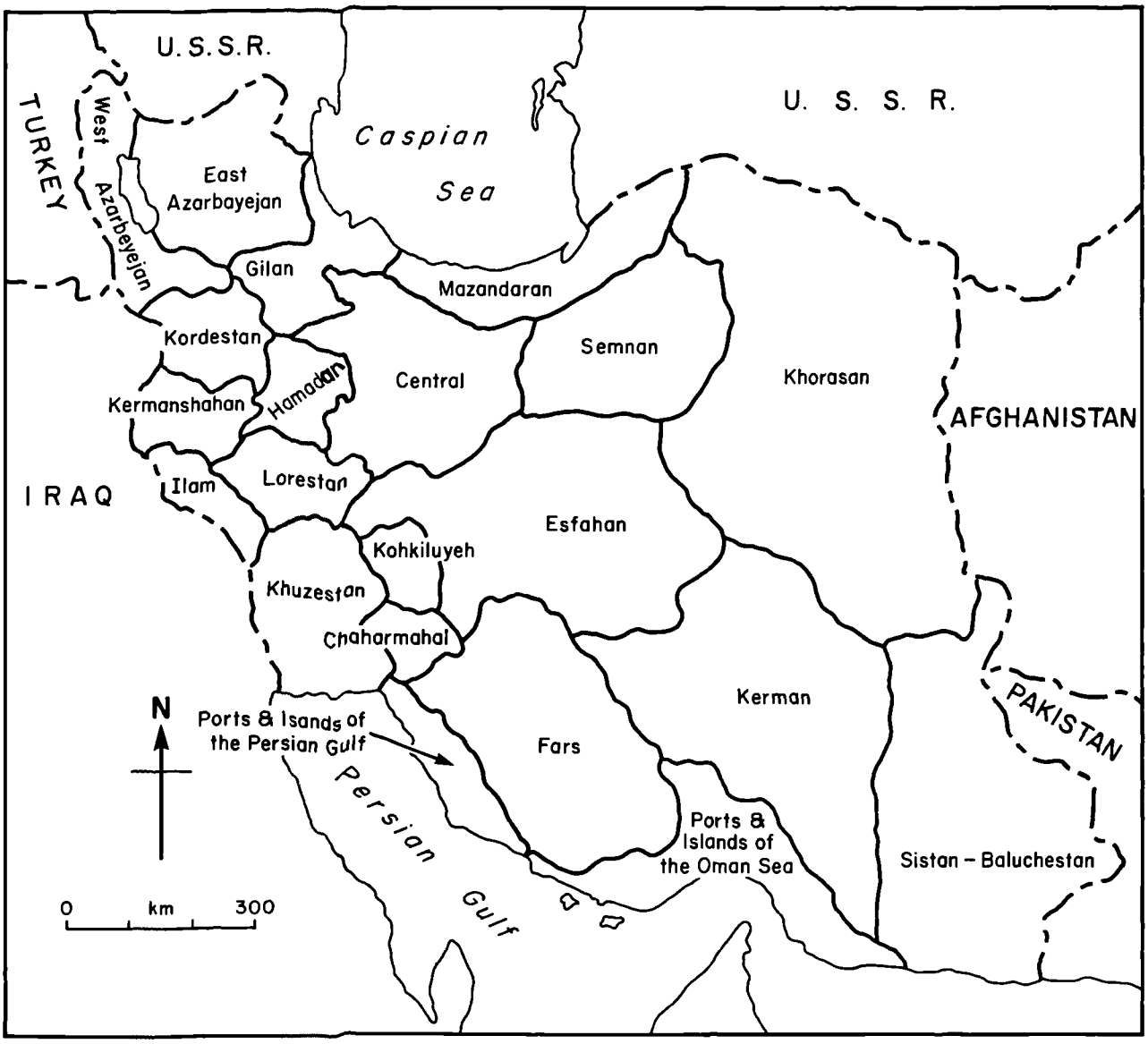

Figure 2.2 Iran: Census Divisions by Ostan and Farmandarikol, 1966.

Table 2.2 : Iran : Area, Population and the number of Shahrestan, Bakhsh, Dehestan by Ostan or Farmandarikol, 1966

	Ostan or Farmandarikol	Population	Area (sq.km.)	No. of Shahrestan	No. of Bakhsh	No. of Dehestan
1	Central	4,979,081	91,519	15	46	105
2	Gilan	1,752,504	36,557	13	28	77
3	Mazandaran	1,841,637	47,365	10	34	123
4	E.Azarbayejan	2,596,439	67,101	10	33	86
5	W.Azarbayejan	1,087,182	43,660	9	18	64
6	Kermanshahan	776,409	24,548	5	17	60
7	Khuzestan	1,578,079	64,654	11	30	109
8	Fars	1,439,804	133,298	14	31	112
9	Kerman	761,851	192,978	8	17	123
10	Khorasan	2,497,381	313,337	15	52	210
11	Esfahan	1,703,701	151,799	14	51	82
12	Sistan-Baluchestan	454,996	181,578	6	52	69
13	Kordestan	619,573	24,998	6	16	49
14	Hamadan, F.	889,888	20,172	4	11	34
15	Chaharmahal, F.	298,448	14,820	2	8	23
16	Lorestan F.	686,307	31,383	3	17	63
17	Ham F.	148,307	18,162	4	13	41
18	Kohkiluyek F.	161,219	14,261	2	7	13
19	Islands, Ports of Persian Gulf F.	251,921	66,557	2	15	56
20	Islands, Ports of Oman Sea F.	346,410	27,653	2	9	32
21	Semnan F.	207,786	81,598	3	8	23
	Total	25,078,923	1,648,000	158	463	1,554

Source: Second National Census of Population and Housing, 1966, Vols. 147-167.

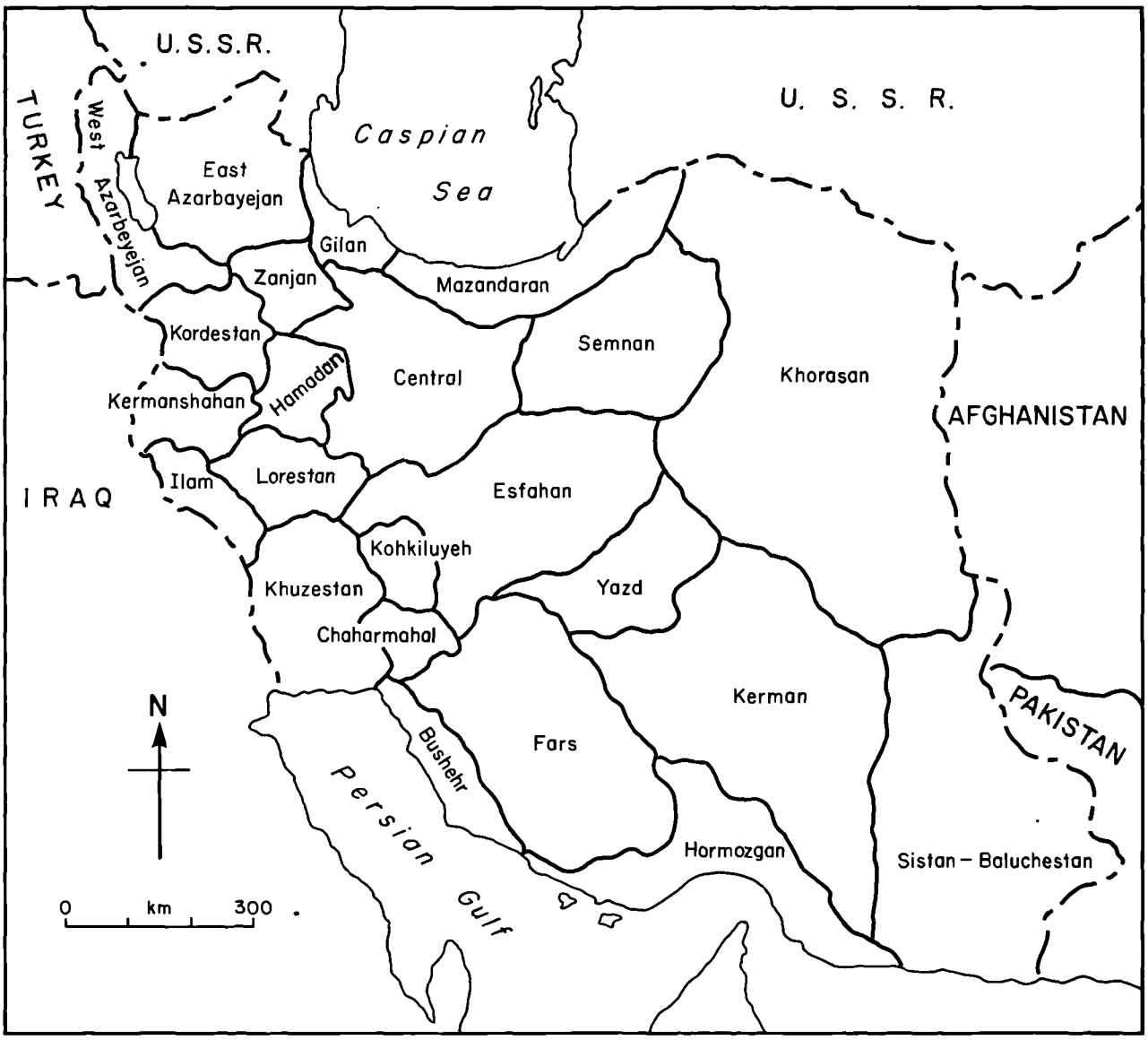

Figure 2.3 Iran: Census Divisions by Ostan, 1976.

Table 2.3 : Iran : Area, Population and the number of Shahrestan, Bakhsh, Dehestan by Ostan, 1976.

Ostan or Farmandarikol	Popul-ation	Area (sq.km.)	No. of Shahre-stan	No. of Bakhsh	No. of Deshestan
1 Central	6,962,206	78,540	10	37	83
2 Gilan	1,581,872	14,709	10	21	56
3 Mazandaran	2,387,171	47,365	10	35	128
4 E.Azarbayejan	3,197,685	67,102	11	34	86
5 W.Azarbayejan	1,407,604	43,660	9	18	64
6 Kermanshahan	1,030,714	24,549	5	17	60
7 Khuzestan	2,187,118	64,654	11	30	112
8 Fars	2,035,582	133,298	14	33	113
9 Kerman	1,091,148	192,978	8	18	123
10 Khorasan	3,264,398	313,337	16	52	210
11 Esfahan	1,969,965	94,903	10	21	70
12 Sistan-Baluchestan	664,292	181,578	6	22	70
13 Kordestan	782,440	24,998	6	16	49
14 Hamadan	1,088,024	20,172	4	11	34
15 Chaharmahal	394,357	14,820	2	8	23
16 Lorestan	933,939	31,383	3	17	63
17 Ilam	246,024	18,162	4	13	41
18 Kohkiluyeh	244,370	14,261	3	7	13
19 Bushehr (1)	347,863	27,653	2	10	32
20 Hormozgan (2)	462,440	66,557	5	17	56
21 Semnan	492,113	94,577	6	15	61
22 Zanjan (3)	580,570	21,848	3	7	22
23 Yazd (4)	356,849	56,896	4	10	18
Total	33,708,744	1,648.000	162	469	1,587

(1) Beshehr Ostan was Ports, Islands of Persian Gulf Farmandarikol in 1966.
(2) Hormozgan Ostan was Ports, Islands of Oman Sea Farmandarikol in 1966.
(3) Zanjan Ostan was part of Gilan Ostan in 1966.
(4) Yazd Ostan was part of Esfahan
Source: Third National Census of Population and Housing,1976.Vols.163-185.

At the time of the 1976 census, with the abandonment of the Farmandarikols, the state division of Iran was as follows (Figure 2.3):

23 Ostans, 162 Shahrestans, 469 Bakhshs and 1,587 Dehestans (Table 2.3). Two new Ostans appeared in 1976 (Zanjan and Yazd), the first (Zanjan) being separated from Gilan Ostan and the second (Yazd) from Esfahan Ostan. For the purpose of comparison the number of Ostans in 1976 is adjusted. In other words the Ostans of Gilan and Esfahan will be treated as in 1966 without regard to the administrative division that occurred in these two Ostans when Zanjan and Yazd appeared in 1976. It should be noted that, in addition to the change in their administrative status, the name of the Farmandarikols of Ports and Islands of Persian Gulf and Ports and Islands of Oman Sea changed to Bushehr and Hormozgan respectively in 1976.

2.1.2 Migration data

Prior to the First National Housing and Population census, which was conducted in November 1956, there were no reliable data on internal migration in Iran. It was only in the 1956 census, for the first time, that the relevant questionnaires contained questions about the place of birth and the place of residence of the population enumerated at the time of the census.

In both the 1956 and 1966 censuses, migration data are available only in the form of place of birth and place of current residence and it was not until the 1976 census that a question was included asking where the respondent was living five years before the enumeration date (November 1976). It should be added here that this question was not very helpful, because the answer does not indicate the exact part of the country by administrative division (village, city, Ostan, etc.), and people may prefer others to believe that they are city people

rather than rural, and hence lie about their previous place of residence (Noorbakhsh - Khiabani,S., 1977, p.111).

In the first census (1956) the exact locations of the birth place (origin) and the place of residence (destination) of migrants were clearly identified. Each person was asked to report the Ostan and Shahrestan where he was born and his residence as of November 1956. The inter-Ostan and inter-Shahrestan population flows were published in separate tables. Moreover, population interchanges between contiguous and non-contiguous Shahrestans were also tabulated.

Migration data collected in the second census (1966) marked a considerable improvement over the previous data. In this census the age and sex of migrants were stated and this permitted the examination of migration differentials.

The 1966 census asked several questions from which data on the internal movements of the population may be derived. The following categories could be identified:

1. Born in the Shahrestan where enumerated. This indicates non-migrants.
2. Born in another Shahrestan in the same Ostan; inter-Shahrestan, within-Ostan migrants.
3. Born in another Ostan, this category thus refers to inter-Ostan migration.
4. Born in a foreign country.

As stated earlier, in 1976, in addition to the collection of migration data similar to those of previous census(1966), data on the place of residence of the population in 1971 (5 years prior to the 1976 census) were collected.

It should be mentioned that, due to the lack of comparable data and the changes in Ostan boundaries which occurred between the three censuses (1956, 1966, 1976), direct comparison between censuses is not always possible. However, an attempt has been made to make comparisons between the 1966 and 1976 censuses, while the 1956 census is less comparable with these two censuses. Therefore, inter-Ostan migration in 1956 will be examined separately, after which an attempt will be made to examine inter-Ostan migration in 1966 and 1976 in a comparative manner. For this purpose the relevant data on migration in 1966 and 1976 are presented in such a way that comparison can be made between the two censuses. Since data used in this study are based on the place of birth of the migrants, the analysis of inter-Ostan migration as well as inter-Shahrestan migration (Chapter 6) thus refers to "lifetime" migration. To avoid repetition the term of "lifetime" does not appear in the text, Tables and Figures.

In this chapter, in addition to the analysis of inter-Ostan migration in the last three censuses, the characteristics of the major Ostans of net-migration, reasons for migration, and the age and sex structure of the migrants will be examined.

2.2 Inter-Ostan migration flow, 1956

Table 2.4 shows the flows between the Ostan of birth and the Ostan of enumeration for each of the thirteen Ostans (provinces) of Iran in 1956. Although the table presents only the cumulative effects of multiple movements, some significant features of population movements and patterns of inter-Ostan migration can be distinguished by analysing the matrix.

There were massive differences in the size of the flows. More than one third of all movements between Ostans was accounted for

TABLE 2.4 : INTER-OSTAN MIGRATION MATRIX, 1956

	Ostan of birth	Ostan of enumeration													
		Central	Gilan	Mazand-aran	East Azarbay-ejan	West Azarbay-ejan	Kerman-shahan	Kord-estan	Khuzes-tan	Fars Banader	Kerman	Khor-asan	Esfahan Yazd	Sistan Baluch-estan	Total
1	Central		6,482	21,387	2,820	1,491	5,458	653	14,510	2,777	1,043	6,758	2,688	768	66,835
2	Gilan	161,756		15,575	3,006	532	3,333	1,512	12,032	502	353	2,159	599	148	201,507
3	Mazandaran	85,379	1,696		432	159	1,508	106	1,851	1,249	136	4,308	844	7	97,741
4	East Azarbayejan	182,529	18,648	12,660		66,348	3,930	2,309	5,814	1,256	268	5,858	908	20	300,735
5	West Azarbayejan	13,049	585	349	3,874		1,333	985	1,765	110	48	295	127	12	22,532
6	Kermanshahan	88,237	2,245	1,301	1,149	432		9,708	21,152	669	206	1,406	545	114	127,164
7	Kordestan	3,633	455	234	943	1,739	4,298		839	99	45	125	122	18	12,550
8	Khuzestan	32,769	1,624	996	291	179	6,573	136		3,624	148	1,105	2,258	9	49,797
9	Fars-Banader	15,444	220	473	133	113	901	42	44,640		1,550	864	18,431	18	82,988
10	Kerman	9,777	144	334	121	59	584	43	9,162	3,865		3,984	1,800	325	33,123
11	Khorasan	49,338	1,358	16,151	226	1,346	2,604	53	3,550	5,462	1,317		911	554	87,861
12	Esfahan-Yazd	83,253	657	1,836	241	132	2,362	150	110,423	7,921	2,053	10,366		122	219,986
13	Sistan-Baluchestan	973	60	6,212	25	30	100	187	807	397	936	6,622	58		16,407
	Total	726,137	34,174	77,508	13,264	72,560	32,984	15,884	226,545	27,301	8,103	43,840	29,291	11,635	1,319,226

Source: First National Census of Population and Housing, 1956, vol.1.

by only three flows, each of which had over 100,000 people, the largest (East Azarbayejan to Central) containing 182,529 people. Flows from Gilan to Central and Esfahan to Khuzestan, containing 161,756 and 110,423 people respectively,were the next largest flows.

Four flows fell into the 50,000 to 100,000 size category, (those from Kermanshahan, Mazandaran, and Esfahan to Central Ostan and from East Azarbayejan to West Azarbayejan Ostan), five flows were between 20,000 and 50,000, twenty-three more flows were between 5,000 and 20,000, while the remaining 121 flows were under 5,000. In overall terms, then, the spatial patterns of inter-Ostan migration shown by the 1956 census were dominated by a relatively small number of large flows. The 22 flows,out of a total of 156 flows,which contained more than 10,000 people each accounted for more than 82 per cent of the total recorded population movement. These 22 major flows are shown in Table 2.5. 14 out of the 22 major flows occurred between non-contiguous Ostans and the remaining 8 flows were between neighbouring Ostans. Of the total of 22 major flows, 9 were towards Central Ostan with the largest flow from East Azarbayejan Ostan containing 182,529 people, followed by Gilan with 161,756, Kermanshahan 88,237, Mazandaran 85,379, and Esfahan with 83,237 migrants. In contrast, flows from Central Ostan to these Ostans were negligible by comparison. Thus Central Ostan, with a very strong attraction, had experienced massive in-flows and ranked first among the thirteen Ostans in terms of attracting migrants, while East Azarbayejan Ostan experienced heavy out-flows not only to Central Ostan but to all the other Ostans and, with a total of 300,735 out-migrants, took first place among the Ostans of out-migration.

Table 2.5 : Inter-Ostan flows greater than 10,000, 1956

	From	To	Type	Total
1	East Azarbayejan	Central	XN	182,529
2	Gilan	Central	N	161,756
3	Esfahan	Khuzestan	XN	110,423
4	Kermanshahan	Central	XN	88,237
5	Mazandaran	Central	N	85,379
6	Esfahan	Central	XN	83,253
7	East Azarbayejan	West Azarbayejan	N	66,348
8	Khorasan	Central	XN	49,338
9	Fars	Khuzestan	XN	44,640
10	Khuzestan	Central	XN	32,769
11	Central	Mazandaran	N	21,389
12	Kermanshahan	Khuzestan	XN	21,152
13	East Azarbayejan	Gilan	N	18,648
14	Fars	Esfahan	N	18,431
15	Khorasan	Mazandaran	N	16,151
16	Gilan	Mazandaran	N	15,575
17	Fars	Central	XN	15,444
18	Central	Khuzestan	XN	14,510
19	West-Azarbayejan	Central	XN	13,049
20	East-Azarbayejan	Mazandaran	XN	12,660
21	Gilan	Khuzestan	XN	12,032
22	Esfahan	Khorasan	XN	10,366
	Total			1,094,079

Type : N = Neighbouring Ostans
XN = Non-neighbouring Ostans

Source: Table 2.4

2.2.1 Patterns of net inter-Ostan migration in Iran, 1956

The number and percentage of inter-Ostan migrants based on the 1956 census results in each Ostan are presented in Table 2.6 so that comparison can be made between Ostans. Table 2.6 also shows that there were considerable differences in population size between Ostans. For instance, Central Ostan contained 14.33 per cent of the total population, more than six times as many people as the least populated Ostan - Sistan-Baluchestan - which had only 2.25 per cent of the total population.

2.2.2 In-migration

Three classes of Ostans can be distinguished in terms of receiving migrants : The first consisted of Ostans which had experienced a large volume of in-migration : Central Ostan with 726,137 or 55.04 per cent, and Khuzestan Ostan with 226,545 or 17.2 per cent of the total in-migrants were placed in this class and together accounted for more than 72.0 per cent of inter-Ostan migrants in Iran as a whole. At the other extreme, there was a class of Ostans with very limited in-migration. This included Kerman Ostan with only 8,103 or 0.6 per cent, Sistan-Baluchestan Ostan with 11,635 or 0.89 per cent, East Azarbayejan Ostan with 13,264 or 1.0 per cent and finally Kordestan with 15,884 or 1.2 per cent of the total in-migrants. This group of 4 Ostans accounted for only 3.69 per cent of in-migrants. Between these two extremes there was a third class of Ostans, including Mazandaran Ostan, with 5.87 per cent, West Azarbayejan with 5.5 per cent, Khorasan, 3.32 per cent, Gilan, 2.6 per cent, Kermanshahan, 2.5 per cent, Esfahan-Yazd 2.22 per cent, and Fars-Banader with 2.07 per cent of the total in-migrants. These Ostans all together accounted for only 24.08 per cent of the total in-migrants in Iran.

Table 2.6 : Total Population, In-Migrants, Out-Migrants, Net-Migration, and Migration Rates, by Ostan, Iran, 1956

	Ostan of Origin and destination	Total Population	%	In-migrants	%	Out-migrants	%	Total migrants	%	Net-migration	Gross migration rate per 1000	Net migration rate per 1000	Net migration as % of gross
1	Central	2,717,309	14.33	726,137	55.04	66,835	5.07	792,972	30.05	+659.302	294.0	+ 243	83.14
2	Gilan	1,629,699	8.6	34,174	2.6	201,507	15.3	235,681	8.93	-167,333	144.6	- 103	71.0
3	Mazandaran	1,683,905	8.9	77,508	5.87	97,741	7.4	175,249	6.64	- 20,233	104.0	- 12	11.54
4	E.Azarbayejan	2,142,270	11.3	13,264	1.0	300,735	22.8	313,999	11.9	-287,471	146.6	- 134	91.4
5	W.Azarbayejan	721,136	3.8	72,560	5.5	22.532	1.7	95,092	3.6	+ 50,028	132.0	+ 69.4	52.61
6	Kermenshahan	1,376,989	7.26	32,984	2.5	127,164	9.64	160,148	6.07	- 94,180	116.3	- 68.4	58.8
7	Kordestan	555,413	2.93	15,884	1.2	12,550	0.95	28,434	1.08	+ 3,334	51.2	+ 6	11.72
8	Khuzestan	2,068,503	10.91	226,545	17.2	49,797	3.8	276,342	10.47	+176,748	133.6	+ 85.4	63.96
9	Fars-Banader	1,320,614	6.96	27,301	2.07	82,988	6.3	110,289	4.18	- 55,687	83.5	- 42	50.49
10	Kerman	789,345	4.16	8,103	0.6	33,123	2.5	41,226	1.56	- 25,020	52.3	- 32	60.69
11	Khorasan	2,007,581	10.59	43,840	3.32	87,861	6.67	130,701	4.95	- 44,021	65.6	- 22	33.68
12	Esfahan-Yazd	1,513,577	7.98	29,291	2.22	219,986	16.68	249,277	9.44	-190,695	164.7	- 126	76.5
13	Sistan-Baluchestan	428,363	2.25	11,635	0.89	16,407	1.24	28,042	1.06	- 4,772	65.5	- 11	17.01
	Total	18,954,704	100.0	1,319,226	100.0	1,319,226	100.0	2,338,452	100.0	-	69.6		

Source : Table 2.4.

2.2.3 Out-migration

Three out of thirteen Ostans (East Azarbayejan Ostan with 300,735 or 22.8 per cent, Esfahan-Yazd Ostan with 219,986, or 16.68 per cent, and Gilan Ostan with 201,507 or 15.3 per cent of the total out-migrants) experienced large out-migration and accounted for about 55.0 per cent of the total out-migrants, while the remaining 10 Ostans all together accounted for less than half of the total out-migrants (45.27 per cent).

Among thirteen Ostans, Kordestan Ostan had the lowest percentage of out-migrants (0.95 per cent) while, as noted earlier, East Azarbayejan Ostan had the highest percentage of out-migrants (22.8 per cent). It is interesting to note that Central Ostan, which received 55.0 per cent of the total in-migrants, only accounted for 5.07 per cent of the total out-migrants.

2.2.4 Gross migration

As might be expected, Central Ostan,with 792,972 migrants, had the highest percentage of the total migrants in Iran (30.05 per cent), followed by East Azarbayejan Ostan, 313,999 (11.9 per cent) Khuzestan Ostan, 276,342 (10.47 per cent), Esfahan-Yazd 249,277 (9.44 per cent) and Gilan Ostan, with 235,681 (8.93 per cent) of the total migrants. All the remaining 8 Ostans accounted for less than 30.0 per cent (29.14 per cent) of the total migrants. Among the thirteen Ostans of Iran, Sistan-Baluchestan Ostan with only 28,042 migrants had the lowest percentage of total migrants (1.06 per cent).

2.2.5 Net migration

Four out of thirteen Ostans experienced a net in-flow of migrants. One Ostan, Central Ostan, accounted for nearly 75.0 per cent of the total net inflow. Thus, in terms of net migration, two classes of provinces can be distinguished. The first consisted of Ostans which experienced net in-migration (Central Ostan, Khuzestan, West Azarbayejan and Kordestan), and the second consisted of Ostans which experienced net out-migration (East Azarbayejan, Esfahan-Yazd, Gilan, Kermanshahan, Mazandaran, Fars-Banader, Kerman, and Sistan-Baluchestan). In the first category, Central Ostan can be recognized as the main net gainer, with 659,302 net in-migrants (74.12 per cent of the total), followed by Khuzestan Ostan with 176,748 (19.89 per cent), West Azarbayejan with 50,028 (5.62 per cent) and finally Kordestan Ostan which gained only 3,334 (0.37 per cent) migrants.

Among Ostans which formed the second category, East Azarbayejan Ostan experienced the largest net out-migration and in fact was the main loser with 287,471 net out-migrants, which represented nearly 33.0 per cent of the total net-out-migrants. Esfahan-Yazd Ostan was placed after East Azarbayejan with 190,695 (21.44 per cent), followed by Gilan Ostan with 167,333 (18.81 per cent), Kermanshahan with 94.180 (10.58 per cent), Fars-Banader with 55,687 (6.26 per cent), Khorasan with 44,021 (4.94 per cent), Kerman with 25,020 (2.81 per cent), Mazandaran, 20,233 (2.27 per cent), and finally Sistan-Baluchestan with 4,772 (0.44 per cent). Figure 2.4 shows Ostan population change in Iran through migration in 1956.

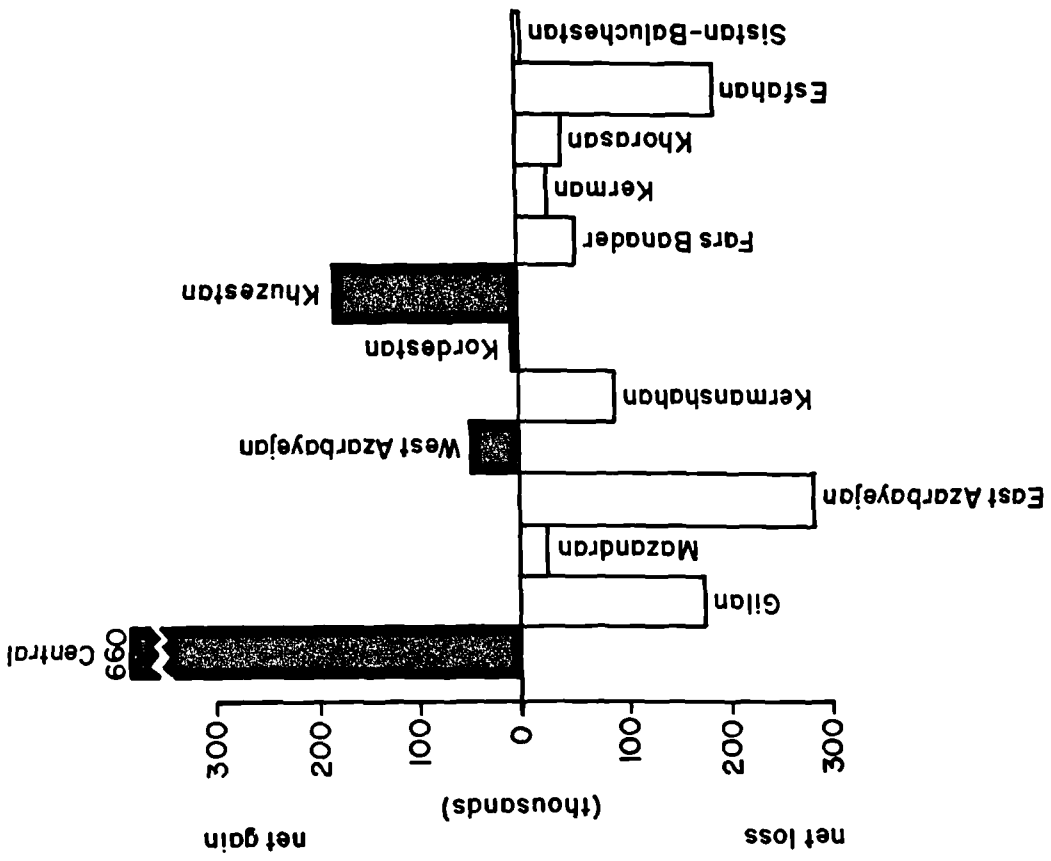

Figure 2.4 Ostan population change through migration, Iran, 1956.

2.2.6 Migration rates

Table 2.6 also shows the gross and net migration rates for Ostans, thus taking account of the variations in the size of the resident population. Gross migration rates ranged from 51.2 per 1000 in Sistan-Baluchestan Ostan to 292.0 per 1000 in Central Ostan as might be expected.

Although Esfahan-Yazd Ostan with 164.7 per 1000, East Azarbayejan Ostan, with 146.6 per 1000, and Gilan Ostan with 144.6 per 1000, showed high gross migration rates and were placed after Central Ostan, these high rates were due principally to out-migration rather than to inward movements. For instance, of the total 313,999 migrants of East Azarbayejan Ostan only 13,764 were in-migrants, while all the rest, 300,735, were out-migrants. Esfahan-Yazd Ostan, Gilan and Kermanshahan had a similar situation in terms of gross migration rates. Conversely, in Central Ostan, Khuzestan, Kordestan and West Azarbayejan Ostan, the proportion of in-migrants among total migrants was very high, and the high gross migration rate of these Ostans, particularly Central Ostan, were due mainly to in-migration.

2.2.7 Net in-migration rates

Four out of thirteen Ostans had positive net change in their population due to in-migration. As a result of the large volume of in-migrant streams, Central Ostan had the highest net in-migration rate (243 per 1000) followed by Khuzestan Ostan with 85.4 per 1000, West Azarbayejan with 69.4 per 1000 and finally Kordestan with a very low (6.0 per 1000) in-migration rate. The high in-migration rate of Central Ostan clearly showed that this Ostan

was the principal destination for migrants from numerous Ostans, particularly from East Azarbayejan Ostan, Gilan and Kermanshahan Ostan.

2.2.8 Net out-migration rates

Among the nine Ostans which showed negative net change in their population due to out-migration, East Azarbayejan Ostan had the highest out-migration rate (-134 per 1000), followed by Esfahan-Yazd (-126 per 1000) and Gilan (-103 per 1000). The net out-migration rate of the remaining 6 Ostans of out-migration ranged from -11.0 per 1000 in Sistan Baluchestan to-68.4 per 1000 in Kermanshahan. Thus the lowest net out-migration rate in 1956 belonged to Sistan-Baluchestan Ostan.

2.2.9 Ratio of net to gross migration

Ratios of net to gross migration for 13 Ostans are also presented in Table 2.6. Among four Ostans which experienced net in-migration, the highest net to gross migration ratio belonged to Central Ostan (83.14). The net to gross migration ratio for Khuzestan was 63.96 and for West Azarbayejan and Kordestan was 52.61 and 11.72 respectively.

Among 9 Ostans which experienced net out-migration, East Azarbayejan Ostan showed the highest ratio of net to gross migration (91.4) followed by Esfahan-Yazd (76.5) and Gilan (71.0). Except for two Ostans which had lower net to gross migration ratios (Mazandaran 11.54, Sistan-Baluchestan 17.01),all the remaining four Ostans (Khorasan 33.68, Fars-Banader 50,49, Kerman 60.69, Kermanshahan 58.8) had relatively high net to gross migration ratios.

It should be added here that the applicability and significance of the ratio of net to gross migration in studies relating to internal migration is discussed by Shryock and Siegel (1973,656). According to them, the ratio of net migration to turnover may be considered as a measure of the "effectiveness" of internal migration. The higher the ratios for a set of areas the fewer the moves that are required to effect a given amount of population redistribution among them. This ratio ranges from 0 to 100. The effectiveness of a stream and its counterstream may also be measured in this fashion.

For example, the effectiveness of migration between East Azarbayejan and Central Ostan based on data presented in Table 2.4, may be calculated as follows:

$$\frac{\text{179,709 (Net migration of Central Ostan)}}{\text{185,349 (Total migration between Central and E.Azarbayejan Ostan)}} \times 100 = 96.9$$

This is a high ratio. Often the counterstream is as large as the stream, so there is little net migration and a low ratio of effectiveness. Furthermore, a summary measure of the effectiveness of migration for all the states, provinces, or other primary geographic divisions of a country may also be obtained based on the following formula:

$$\text{Effectivness Index} = \frac{\text{Net in-migrants}}{\text{Total inter area migrants}} \times 100.$$

Based on this formula the effective indices for Iran in 1956, 1966 and 1976 were 38, 32.8 and 26.7 respectively.

2.3 Inter-Ostan migration in Iran, 1966, 1976

This section attempts a comparative analysis of inter-Ostan migration in Iran based on the 1966 and 1976 birth-place data. As stated earlier, in 1966, Iran was divided into 13 Ostans and 8 Farmandarikols; therefore, in order to acquire a better picture of internal migration in Iran, flows between these 21 Ostans and Farmandarikols should be examined.

The flows between the Ostan or Farmandarikol of birth and the Ostan or Farmandarikol of enumeration for each of the 21 Ostans or Farmandarikols are shown in Table 2.7.

In order to make the 1976 migration data comparable to those of the 1976, the Ostans of Gilan and Esfahan,which were divided into two Ostans each at the time of the 1976 census,will be treated as in 1966 without regard to the administrative division that occurred in these two Ostans. Thus, as in 1966, in 1976 migration flows will be examined between 21 Ostans. Table 2.8 shows the inter-Ostan migration flows in 1976. Comparing Table 2.8 with Table 2.7 shows changes in the volume of inter-Ostan migration flows between 1966 and 1976.

In 1966, there were in all 420 inter-Ostan migration flows, but 8 out of these were insignificant since they did not carry any numerical value; these 8 flows were : from Kohkiluyeh to West Azarbayejan, Ilam to Sistan-Baluchestan, Kohkiluyeh to Sistan-Baluchestan, Ilam to Chaharmahal, Kohkiluyeh to Ilam, Ports and Islands of Oman Sea to Ilam, Ilam to Ports and Islands of Persian Gulf, and Ilam to Semnan.

In 1976 there were no such insignificant flows and almost all the 420 flows had a greater volume than that recorded in 1966.

Table 2.7 :

INTER-OSTAN MIGRATION MATRIX, IRAN, 1966

OSTAN OR FARMANDARIKOL OF BIRTH	OSTAN OR FARMANDARIKOL OF ENUMERATION																				
	Central	Gilan	Mazandaran	East Azarbayejan	West Azarbayejan	Kerman-Shahan	Khuzes-tan	Fars	Kerman	Khorasan	Esfahan	Sistan Baluchestan	Kordestan	Hamadan	Chahar-Mahal	Lorestan	Ilam	Kohkiluyeh	Persian Gulf	Oman Sea	Semnan	Total
1 Central		11,728	27,818	8,417	4,431	5,316	24,319	9,448	2,021	12,706	8,074	1,617	2,422	5,909	380	7,439	431	304	811	996	2,670	137,257
2 Gilan	153,144		20,465	5,601	1,845	1,388	4,705	1,459	293	3,133	1,157	191	2,306	651	50	1,328	52	66	233	273	301	198,641
3 Mazandaran	45,265	2,548		1,444	521	320	1,293	655	251	4,080	522	263	140	157	21	238	40	18	77	67	1,056	58,976
4 East Azarbayejan	276,700	18,030	14,670		32,754	2,525	4,810	2,695	642	5,615	1,594	299	2,663	649	39	719	254	100	487	354	526	366,134
5 West Azarbayejan	25,282	471	629	9,160		1,153	1,448	440	85	849	499	109	3,937	403	14	145	52	29	58	99	99	44,961
6 Kermanshahan	26,918	253	519	693	805		5,682	842	143	752	653	85	3,611	3,136	47	1,758	2,046	82	64	160	129	48,398
7 Khuzestan	21,193	447	464	722	322	1,186		6,339	399	764	4,922	137	429	821	1,665	3,308	336	4,096	3,507	1,293	188	52,538
8 Fars	28,451	366	644	1,079	454	721	24,672		1,156	1,516	5,811	246	193	166	116	353	38	2,470	3,843	2,491	298	75,084
9 Kerman	18,483	181	690	413	128	187	2,580	3,285		7,110	2,362	3,365	33	41	31	77	6	29	169	4,791	188	44,149
10 Khorasan	98,135	758	70,253	886	421	704	3,303	1,521	700		1,352	7,329	192	271	24	408	119	29	131	199	3,417	190,152
11 Esfahan	195,574	862	3,362	905	563	1,498	51,560	7,362	6,827	10,953		1,629	306	662	3,176	2,829	49	669	575	946	1,137	291,444
12 Sistan-Baluchestan	2,731	67	54,022	103	62	80	759	451	1,580	6,204	442		10	21	5	33	24	6	46	398	350	67,394
13 Kordestan	8,687	396	410	1,079	1,854	4,258	803	245	24	351	144	37		1,957	23	226	277	6	39	59	112	20,987
14 Hamadan	135,323	865	1,246	620	637	13,162	8,172	613	116	883	465	85	3,911		20	6,511	293	76	108	158	156	173,420
15 Chaharmahal	2,500	41	46	30	29	103	17,437	246	348	46	5,285	7	14	34		122	3	172	116	51	5	26,635
16 Lorestan	38,055	165	491	622	219	3,483	16,919	392	140	609	819	38	421	1,505	55		1,233	140	82	167	68	65,623
17 Ilam	209	2	8	6	13	1,047	371	6	7	13	4	0	81	48	0	54		4	0	6	0	1,879
18 Kohkiluyeh	41	1	1	4	0	5	2,051	5,868	4	6	135	0	3	4	49	4	0		53	6	2	8,237
19 P. I.Persian Gulf	1,137	21	24	40	12	23	10,320	2,861	132	56	168	46	6	7	13	22	24	247		270	3	15,432
20 P. I. Oman Sea	503	11	10	14	7	14	3,510	1,121	1,746	65	95	114	5	5	1	20	0	11	377		6	7,635
21 Semnan	42,367	388	30,912	249	152	93	493	262	100	3,503	294	82	68	66	6	95	10	13	36	70		79,260
TOTAL	1,120,698	37,601	226,693	32,087	45,229	37,266	185,207	46,111	16,714	59,215	34,797	15,679	20,751	16,513	5,735	25,689	5,287	8,567	10,832	12,854	10,711	1,974,236

Source: Second National Census of Population and Housing, 1966, vols. 147-167.

Table 2. 8 :

INTER-OSTAN MIGRATION MATRIX, IRAN, 1976

OSTAN OF BIRTH	OSTAN OF ENUMERATION																				
	Central	Gilan	Mazabdarab	East Azarbayejan	West Azarbayejan	Kerman Shahan	Khuzes-tan	Fars	Kerman	Khorasan	Esfahan	Sistan Baluchestan	Kordestan	Hamadan	Chaher-Mahal	Lorestan	Ilam	Kohkiluyeh	Bushehr	Hormozgan	Semnan	Total
1 Central		26,821	29,186	16,170	7,117	8,079	37,736	17,690	6,141	28,159	36,609	3,985	3,378	16,365	940	12,078	1,237	541	4,627	7,054	30,127	294,041
2 Gilan	246,164		26,508	6,003	2,392	2,719	7,032	3,756	1,772	5,750	5,599	1,289	1,835	2,077	181	1,617	225	112	1,225	2,780	3,226	322,262
3 Mazandaran	97,769	5,693		2,971	1,195	1,150	2,975	2,268	1,102	12,550	3,769	2,236	816	765	111	1,073	182	108	543	850	8,357	146,483
4 E.Azarbayejan	414,874	22,322	17,633		36,965	5,468	7,598	4,733	3,754	6,876	6,483	1,123	5,260	2,099	139	1,545	521	184	1,146	1,558	6,828	647,109
5 W.Azarbayejan	44,778	1,768	1,501	16,420		2,483	2,775	1,647	772	1,079	2,643	713	5,461	1,264	72	525	208	54	520	564	812	86,059
6 Kermanshahan	49,732	1,129	1,180	1,673	1,679		10,874	1,917	740	1,517	2,684	389	6,228	4,304	86	2,386	5,778	110	550	694	1,500	95,150
7 Khuzestan	41,610	1,710	1,580	1,658	852	3,011		13,653	1,414	2,345	23,827	735	780	1,539	2,390	5,398	848	6,402	4,022	4,597	1,398	119,769
8 Fars	42,601	1,249	1,384	1,229	718	1,356	24,675		3,003	2,338	15,816	1,078	803	542	655	1,333	161	5,555	17,057	5,976	1,089	128,618
9 Kerman	27,778	430	595	437	188	533	3,251	4,361		5,299	6,656	4,503	134	259	129	178	37	54	753	11,015	465	67,055
10 Khorasan	153,143	2,127	49,397	1,879	863	1,561	6,156	4,004	3,075		7,176	13,624	671	1,336	158	1,756	410	95	958	1,413	9,317	259,119
11 Esfahan	239,983	1,957	2,794	1,899	1,184	2,137	47,702	12,514	6,395	11,170		2,264	636	861	3,337	2,365	121	1,266	2,208	2,792	3,472	347,057
12 Sistan Baluchestan	6,827	444	68,153	241	109	195	1,333	1,210	2,782	10,252	3,306		99	192	56	261	30	37	840	1,464	448	98,279
13 Kordestan	18,509	1,073	1,278	2,803	5,022	5,660	1,680	725	311	402	727	184		2,608	47	544	273	50	192	487	516	43,091
14 Hamadan	188,485	1,277	1,540	1,420	1,140	15,557	9,173	1,623	333	1,557	2,295	389	2,975		57	7,790	1,830	74	519	880	2,561	241,472
15 Chaharmahal	5,904	200	55	124	50	255	37,085	799	288	335	24,053	176	26	43		211	11	1,477	126	189	109	71,616
16 Lorestan	52,402	762	1,081	763	544	5,972	38,643	1,424	606	1,513	6,981	272	708	2,148	103		6,346	123	319	522	2,336	123,567
17 Ilam	2,430	107	131	143	46	1,751	3,490	62	53	57	205	17	141	162	14	145		8	28	137	27	9,154
18 Kohkiluyeh	455	39	14	26	13	48	14,029	6,151	22	13	585	22	14	42	157	84	15		464	94	18	22,305
19 Bushehr	2,696	128	63	118	94	228	11,426	5,197	518	187	601	95	65	51	14	85	17	332		637	74	22,626
20 Hormozgan	7,334	857	1,277	3,326	845	1,123	5,785	2,717	6,604	2,806	1,326	572	289	1,992	453	943	240	473	680		239	39,881
21 Semnan	106,638	881	32,478	540	336	304	1,198	943	288	5,568	1,452	304	183	347	27	415	78	26	371	438		152,815
TOTAL	1,750,112	70,974	237,828	59,843	61,353	59,590	274,616	87,394	39,972	99,970	152,793	33,970	30,502	38,996	9,126	40,732	18,568	17,081	37,148	44,141	72,919	3,237,428

Source: Third National Census of Population and Housing, 1976, vols. 163-185.

In both 1966 and 1976, there were massive differences in the size of the flows. In 1966 more than one third (38.0 per cent) of all movement between Ostans or Farmandarikols was accounted for by only 4 flows, each of which had more than 130,000 people. The largest (East Azarbayejan to Central) contained 276,700 people. Flows from Esfahan to Central (195,574), Gilan to Central (153,144) and Hamadan to Central (135,323) were the next largest flows. 4 flows fell into the 50,000 to 100,000 size category (Khorasan to Mazandaran, Sistan-Baluchestan to Mazandaran, Esfahan to Khuzestan and Khorasan to Central). 21 more flows were between 10,000 to 50,000, while the remaining 387 flows were under 10,000.

In 1976, flows with more 100,000 people each (1.4 per cent of the flows) accounted for more than 41.0 per cent of all movement between Ostans. Again, the flow from East Azarbayejan was the largest flow and contained 414,878 people. Flows with 10,000 to 100,000 people accounted for 38.9 per cent of migrants while a large number of flows (369) which contained less than 10,000 people each accounted for 87.8 per cent of the total flows and only 19.3 per cent of the total migrants. Thus, in both 1966 and 1976, the pattern of inter-Ostan migration was dominated by a small number of large flows. In 1966, 31 flows (out of a total of 412) which contained more than 10,000 people each, accounted for about 80.0 per cent of the total recorded population movement; in other words 80.0 per cent of the total population movement was carried by only 8.0 per cent of the total flows. 31 major flows are presented in Table 2.9. The number of major flows (flows greater than 10,000) increased from 31 (1,156,597 people) in 1966 to 51 (2,610,805 people) in 1976. As in 1966, in

Table 2.9 : Inter-Ostan Flows Greater than 10,000 Iran, 1966

	From	To	Type	Total
1	East Azarbayejan	Central	XN	276,700
2	Esfahan	Central	N	195,574
3	Gilan	Central	N	153,144
4	Hamadan	Central	N	135,323
5	Khorasan	Central	XN	98,135
6	Khorasan	Mazandaran	N	70,253
7	Sistan-Baluchestan	Mazandaran	XN	54,022
8	Esfahan	Khuzestan	N	51,560
9	Mazandaran	Central	N	45,263
10	Semnan	Central	N	42,367
11	Lorestan	Central	N	38,055
12	East Azarbayejan	West Azarbayejan	N	32,754
13	Semnan	Mazandaran	N	30,912
14	Fars	Central	XN	28,451
15	Central	Mazandaran	N	27,818
16	Kermanshahan	Central	XN	26,918
17	West Azarbayejan	Central	XN	25,282
18	Fars	Khuzestan	XN	24,672
19	Central	Khuzestan	XN	24,319
20	Khuzestan	Central	XN	21,193
21	Gilan	Mazandaran	N	20,465
22	Kerman	Central	XN	18,483
23	East Azarbayejan	Gilan	N	18,030
24	Chaharmahal	Khuzestan	N	17,437
25	Lorestan	Khuzestan	N	16,919
26	East Azarbayejan	Mazandaran	XN	14,679
27	Hamadan	Kermanshahan	N	13,162
28	Central	Khorasan	XN	12,706
29	Central	Gilan	N	11,728
30	Esfahan	Khorasan	N	10,953
31	p.l.Persian Gulf	Khuzestan	N	10,320
	Total			1,567,597

N = Neighbouring Ostans, XN = Non-neighbouring Ostans

Source: Table 2.7

1976 these major flows (11.9 per cent of the total flows) accounted for 80.0 per cent of the total population movement. Table 2.10 lists the 51 major flows in 1976. In both 1966 and 1976 there were considerable differences between the major flows in terms of their size. For instance, in 1966 and 1976 flow from East Azarbayejan to Central Ostan contained 276,700 and 414,874 people respectively and were the largest flows, while 22 out of the 31 major flows in 1966 and 42 out of the 51 major flows in 1976 contained less than 50,000 people each.

In 1966, 12 out of 31 major flows occurred between non-contiguous Ostans. In 1976, of the total of 51 major flows, 17 occurred between non-contiguous Ostans. In 1966, 13 and in 1976, 14 major flows were toward Central Ostan. It should be remembered that, in both 1966 and 1976, the largest flow toward Central Ostan was from the non-contiguous Ostan of East Azarbayejan. Whereas there were 13 major flows toward Central Ostan in 1966, flows from Central Ostan toward other Ostans numbered 4 and accounted for less than 30,000 people each. The number of major flows from Central Ostan toward other Ostans increased to 10 in 1976 which contained less than 40,000 people each.

In order to show the changes in the size and the number of the major flows between 1966 and 1976, the spatial patterns of flows containing more than 10,000 people in 1966 and 1976 is illustrated in Figures 2.5 and 2.6 respectively. Comparing Figure 2.6 with Figure 2.5 shows that there were considerable increases in the size as well as in the number of major flows in a period of 10 years (1966-1976). Of particular interest was the increase in the size of the 5 largest flows toward Central Ostan (from East Azarbayejan, Gilan, Esfahan, Khorasan, Hamadan to Central Ostan). Thus it can

Table 2.10 : Inter-Ostan Flows Greater than 10,000
Iran, 1976

	From	To	Type	Total
1	E.Azarbayejan	Central	XN	414,874
2	Gilan	Central	N	246,164
3	Esfahan	Central	N	239,983
4	Hamadan	Central	N	188,485
5	Khorasan	Central	XN	153,143
6	Semnan	Central	N	106,638
7	Mazandaran	Central	N	97,769
8	Sistan Baluchestan	Mazandaran	XN	68,153
9	Lorestan	Central	N	52,402
10	Kermanshahan	Central	XN	49,732
11	Khorasan	Mazandaran	N	49,397
12	Esfahan	Khuzestan	N	47,702
13	W.Azarbayejan	Central	XN	44,778
14	Fars	Central	XN	42,601
15	Khuzestan	Central	XN	41,610
16	Lorestan	Khuzestan	N	38,643
17	Central	Khuzestan	XN	37,736
18	Chaharmahal	Khuzestan	N	37,085
19	E.Azarbayejan	W.Azarbayejan	N	36,965
20	Central	Esfahan	N	36,609
21	Semnan	Mazandaran	N	32,478
22	Central	Semnan	N	30,127
23	Central	Mazandaran	N	29,186
24	Central	Khorasan	XN	28,159
25	Kerman	Central	XN	27,778
26	Central	Gilan	N	26,821
27	Gilan	Mazandaran	N	26,508
28	Fars	Khuzestan	XN	24,675
29	Chaharmahal	Esfahan	N	24,053
30	Khuzestan	Esfahan	N	23,827
31	E.Azarbayejan	Gilan	N	22,322
32	Kordestan	Central	XN	18,509
33	Central	Fars	XN	17,690
34	E.Azarbayejan	Mazandaran	XN	17,633
35	Fars	Bushehr	N	17,057
36	W.Azarbayejan	E.Azarbayejan	N	16,420
37	Central	Hamadan	N	16,365
38	Central	E.Azarbayejan	XN	16,170
39	Fars	Esfahan	N	15,816
40	Hamadan	Kermanshahan	N	15,557
41	Kohkiluyeh	Khuzestan	N	14,029
42	Khuzestan	Fars	XN	13,653
43	Khorasan	Sistan Baluchestan	N	13,624
44	Mazandaran	Khorasan	N	12,550
45	Esfahan	Fars	N	12,514
46	Central	Lorestan	N	12,078
47	Bushehr	Khuzestan	N	11,426
48	Esfahan	Khorasan	N	11,170
49	Kerman	Oman Sea	N	11,015
50	Kermanshahan	Khuzestan	XN	10,874
51	Sistan Baluchestan	Khorasan	N	10,252
				2,610,805

N = Neighbouring Ostan XN = Non-neighbouring Ostan

Source: Table 2.8.

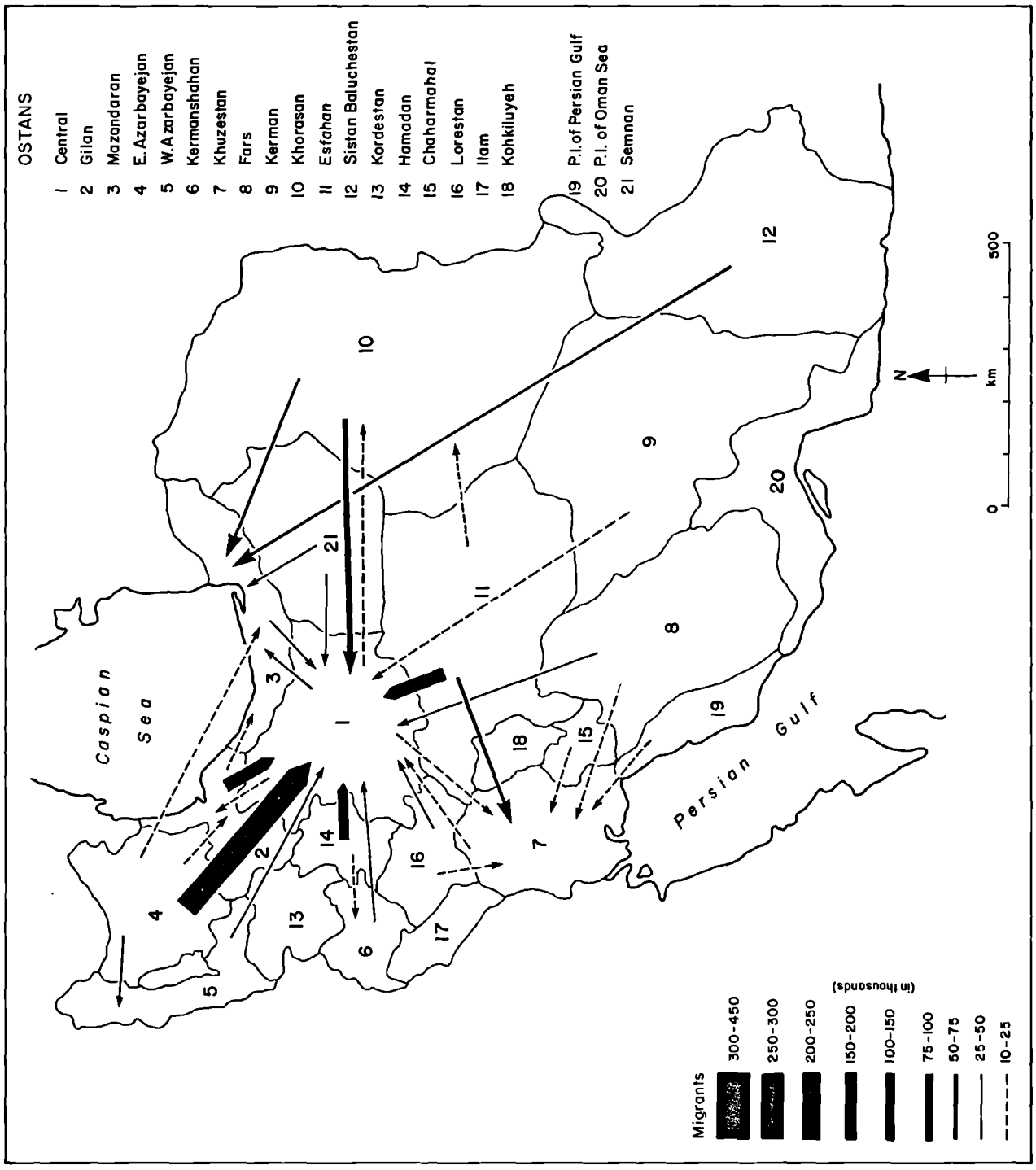

Figure 2.5 Inter-Ostan migration flows greater than 10,000, Iran, 1966.

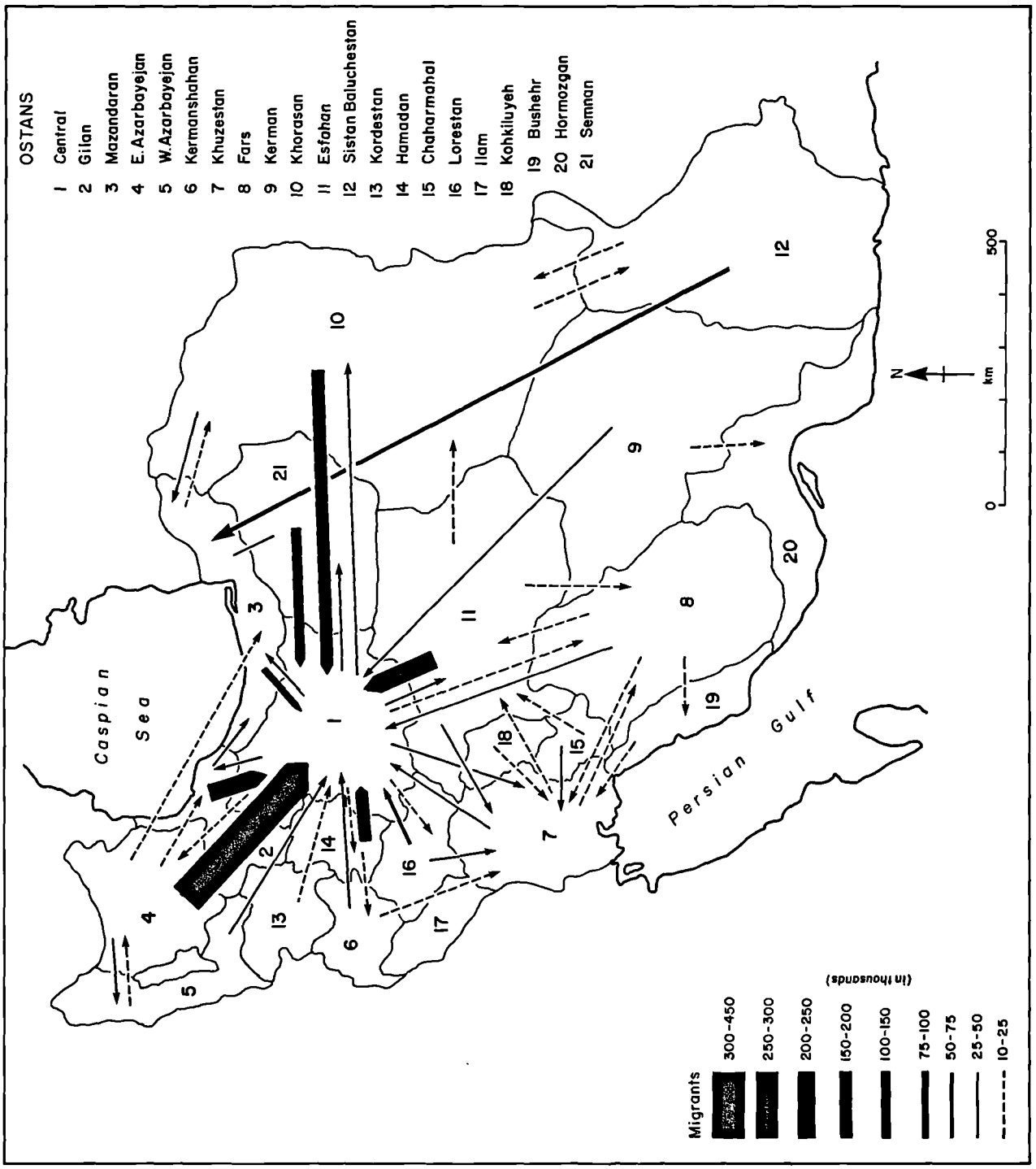

Figure 2.6 Inter-Ostan migration flows greater than 10,000, Iran, 1976.

be concluded that Central Ostan retained its position as the main Ostan of in-migration, attracting the largest flows from other Ostans. Also major flows toward Khuzestan showed an increase in both their size and number, but there was no increase in the number of major flows toward Mazandaran and the increase in the size of the flows was less significant.

2.3.1 Patterns of net inter-Ostan migration in Iran, 1966, 1976

In order to find out the nature of inter-Ostan migration in Iran, the volume of in-migration and out-migration as well as net-migration of each of the 21 Ostans should be examined. For this purpose, the number and percentage of inter-Ostan migrants as well as the relevant migration rates based on the 1966 census results are presented in Table 2.11. In addition, comparable data based on the 1976 census results are presented in Table 2.12. There were considerable differences in population size and the number of in and out-migrants as well as net migration between Ostans. In 1966, Ilam contained 148,307 or 0.6 per cent of the total population of Iran while Central Ostan contained 4,979,081 or 20.0 per cent of the total population. In 1976 the gap between these two Ostans became even wider, when Ilam contained 246, 024, 0.7 per cent and Central Ostan contained 6.962, 206, 20.6 per cent of the total population of the country.

2.3.2 In-migration

Central Ostan, with a very strong nationwide attraction, was the main destination for migrants from all over the country. With 1,120,698 (56.7 per cent of the total in-migrants) in 1966 and with 1,750,112 (54.0 per cent) in 1976, Central Ostan had the highest

Table 2.11 : Total Population, In-Migrants, Out-Migrants, Net Migration, and Migration Rates, by Ostan, Iran, 1966

Ostan of Origin and destination	Total Population	%	In-migrants	%	Out-migrants	%	Total migrants	%	Net-migration	Gross migration rate per 1000	Net migration rate per 1000	Net migration as % of gross
1 Central	4,979,081	20.0	1,120,698	56.7	137,257	7.0	1,257,955	31.8	+983,441	252.6	+197.6	78.2
2 Gilan	1,752,504	7.0	37,601	1.9	198,641	10.0	236,242	6.0	-161,040	134.8	- 92.0	68.1
3 Mazandaran	1,841,637	7.3	226,693	11.5	58,976	3.0	285,669	7.2	+167,717	155.0	+ 91.0	58.7
4 E.Azarbayejan	2,596,439	10.3	32,087	1.6	366,134	18.5	398,221	10.1	-334,047	153.4	-128.7	83.9
5 W.Azarbayejan	1,087,182	4.3	45,229	2.3	44,961	2.3	90,190	2.3	+ 268	83.0	+ 0.2	0.3
6 Kermanshahan	776,409	3.1	37,266	1.9	48,398	2.4	85,664	2.2	- 11,132	110.4	- 14.4	13.0
7 Khuzestan	1,578,079	6.3	185,207	9.4	52,528	2.6	237,745	6.0	+132,669	150.6	+ 84.0	55.8
8 Fars	1,439,804	5.7	46,111	2.3	75,084	3.8	121,195	3.0	- 28,973	84.2	- 20.0	23.9
9 Kerman	761,851	3.0	16,714	0.9	44,149	2.2	60,863	1.5	- 27,435	79.8	- 36.0	45.1
10 Khorasan	2,497,381	9.9	59,215	3.0	190,152	9.6	249,367	6.3	-130,937	99.0	- 52.5	52.5
11 Esfahan	1,703,701	6.8	34,797	1.7	291,444	14.7	326,241	8.2	-256,647	191,5	-150.6	78.6
12 Sistan-Baluch-estan	454,996	1.8	15,679	0.8	67,394	3.4	83,073	2.1	- 51,715	182.6	-113.6	62.2
13 Kordestan	619,573	2.4	20,751	1.0	20,987	1.0	41,738	1.0	- 236	76.4	- 0.4	0.5
14 Hamadan	889,888	3.5	16,513	0.8	173,420	8.8	189.933	4.8	-156,907	213.5	-176.4	82.6
15 Chaharmahal	298,448	1.2	5,735	0.3	26,635	1.3	32,370	0.8	- 20,900	108.5	- 70.0	64.4
16 Lorestan	686,307	2.7	25,689	1.3	65,623	3.3	91,312	2.3	- 39,934	133.0	- 58.0	43.7
17 Ilam	148,307	0.6	5,287	0.3	1,879	0.1	7,166	0.2	+ 3,408	48.4	+ 23.0	47.5
18 Kohkiluyeh	161,219	0.6	8,567	0.4	8,237	0.4	16,804	0.4	+ 330	104.3	+ 2.0	0.02
19 P.I.of Pers.Gulf	251,921	1.0	10,832	0.5	15,432	0.8	26,264	0.6	- 4,600	104.3	- 18.3	17.5
20 P.I.of Oman Sea	346,410	1.4	12,845	0.6	7,635	0.4	20,489	0.5	+ 5,219	59.2	+ 15.0	25.47
21 Semnan	207,786	0.8	10,711	0.5	79,260	4.0	89,971	2.3	- 68,549	433.0	-330.0	76.2
Total	25,078,923	100.0	1,974,236	100.0	1,974,236	100.0	3,948,472	100.0	-	78.7	-	-

Source: Table 2.7

TABLE 2.12 : TOTAL POPULATION, IN-MIGRANTS, OUT-MIGRANTS, NET-MIGRATION AND MIGRATION RATE BY OSTAN, IRAN, 1976

	Ostan or Origin and Destination	Total Population	%	In-migrants	%	Out-migrants	%	Total Migrant	%	Net Migration	Gross Migration Rate, 1,000	Net Migration Rate, 1,000	Net Migration as % of Gross
1	Central	6,962,206	20.6	1,750,112	54.0	294,041	9.0	2,044,153	31.5	+1,456,071	293.6	+ 209.1	71.2
2	Gilan	2,162.442	6.4	70,974	2.2	322,262	10.0	393,236	6.0	- 251,288	181.8	- 116.2	63.9
3	Mazandaran	2,387,171	7.0	237,828	7.3	146,483	4.5	384,311	5.9	+ 91,345	160.9	+ 38.2	23.7
4	E. Azarbayejan	3,197,685	9.5	59,843	1.8	547,109	16.9	606,952	9.3	- 487,266	189.8	- 152.3	80.2
5	W. Azarbayejan	1,407,604	4.2	61,353	1.9	86,059	2.6	147,412	2.3	- 24,706	104.7	- 17.5	16.7
6	Kermanshahan	1,030,714	3.0	59,590	1.8	95,150	2.9	154,740	2.4	- 35,560	150.1	- 34.5	22.9
7	Khuzestan	2,187,118	6.5	274,616	8.5	119,769	3.7	394,385	6.0	+ 154,847	180.3	+ 70.7	39.2
8	Fars	2,035,582	6.0	87,394	2.7	128,618	3.9	216,012	3.3	- 41,224	106.1	- 20.2	19.0
9	Kerman	1,091,148	3.2	39,972	1.2	67,055	2.0	107,027	1.6	- 27,083	98.0	- 24.8	25.3
10	Khorasan	3,264,398	9.7	99,770	3.0	259,119	8.0	358,889	5.5	- 159,349	109.9	- 48.8	44.4
11	Esfahan	2,326,814	7.0	152,793	4.7	347,057	10.7	499,850	7.7	- 194,264	214.8	- 83.4	38.8
12	Sistan-Baluchestan	664,292	2.0	33,970	1.0	98,279	3.0	132,249	2.0	- 64,309	199.0	- 96.8	48.6
13	Kurdestan	782,440	2.3	30,502	0.9	43,091	1.3	73,593	1.1	- 12,589	94.0	- 16.0	17.0
14	Hamadan	1,088,024	3.2	38,996	1.2	241,472	7.4	280,468	4.3	- 202,476	257.8	- 186.0	72.1
15	Chaharmahal	394,357	1.2	9,126	0.3	71,516	2.2	80,642	1.2	- 62,390	204.4	- 158.2	77.3
16	Lorestan	933,939	2.8	40,732	1.3	123,567	3.8	164,299	2.5	- 82,835	157.9	- 88.6	56.1
17	Ilam	246,024	0.7	18,568	0.6	9,155	0.3	27,723	0.4	+ 9,413	112.7	+ 38.2	33.8
18	Kohkiluyeh	244,370	0.7	17,081	0.5	22,305	0.7	39,386	0.6	- 5,224	161.2	- 21.3	13.2
19	Bushehr	347,863	1.0	37,148	1.1	22,626	0.7	59,774	0.9	+ 14,522	171.8	+ 41.7	24.2
20	Hormozgan	462,440	1.4	44,141	1.3	39,881	1.2	84,022	1.3	+ 4,260	181.7	+ 9.9	5.4
21	Semnan	492,113	1.5	72,919	2.2	152,815	4.7	225,734	3.4	- 79,896	458.7	- 162.3	35.3
	TOTAL	33,708,744	100.0	3,237,428	100.0	3,237,428	100.0	6,474,856	100.0		192.0		

Source: Table 2.8

percentage of in-migrants in Iran. Thus in both 1966 and 1976 Central Ostan alone attracted more than 50.0 per cent of the total in-migrants, and about 24.0 per cent of the total in-migrants, was attracted by 4 Ostans (Khuzestan, Mazandaran, Esfahan and Khorasan); the remaining 16 Ostans combined received less than 24.0 per cent of the total in-migrants.

2.3.3 Out-migration

The highest percentage of out-migrants was that from East Azarbayejan Ostan, which was the main Ostan of out-migration and, with 366,134 (18.5 per cent of the total out-migrants) in 1966 and with 547, 109 (16.9 per cent) in 1976, experienced the largest out-migration. Although Central Ostan was the main destination for more than 75.0 per cent of East Azarbayejan's out-migrants, there were some significant migration flows toward other Ostans,particularly to Ostans adjacent to East Azarbayejan.

In 1966, Esfahan Ostan with 291,444 (14.7 per cent), Gilan with 198,641 (10.0 per cent) Khorasan 190,152 (9.6 per cent) and Hamadan with 173,420 (8.8 per cent) were placed after East Azarbayejan Ostan and altogether accounted for more than 43.0 per cent of the total out-migrants. The remaining 16 Ostans, including Central Ostan, accounted for only 38.2 per cent of the total out-migrants. The percentage of out-migrants of Esfahan, Gilan, Khorasan and Hamadan decreased from 43.0 in 1966 to 36.0 in 1976 while that of the remaining 16 Ostans including Central Ostan increased from 38.2 in 1966 to 48.0 in 1976. It should be added that Central Ostan, which received 56.7 and 54.0 per cent of the total in-migrants in 1966 and 1976 respectively, accounted for only 7.0 per cent and 9.0 per cent of the total out-migrants respectively. Ilam,with

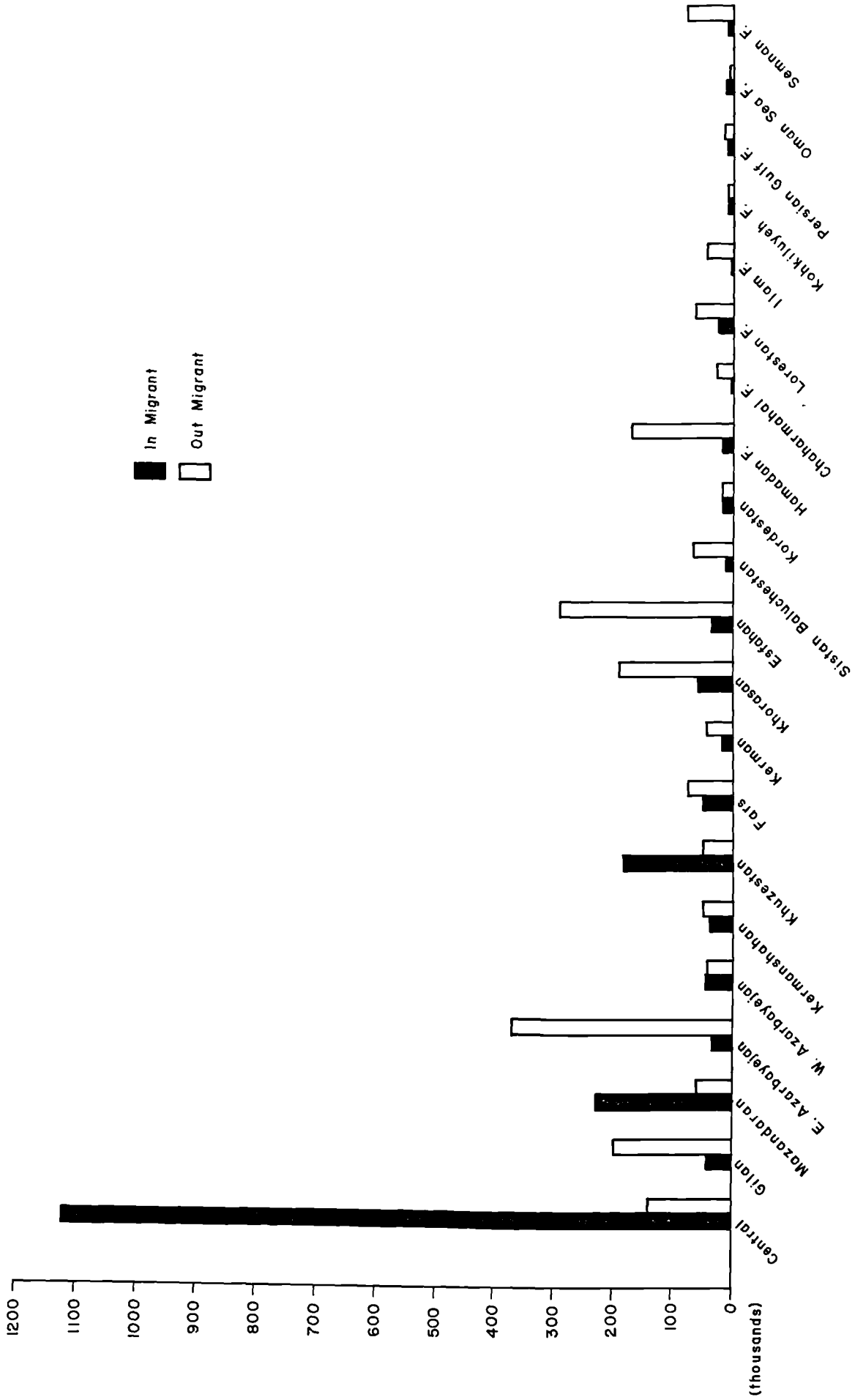

Figure 2.7 Iran: Number of in-migrants and out-migrants of Ostans and Farmandarikols, 1966.

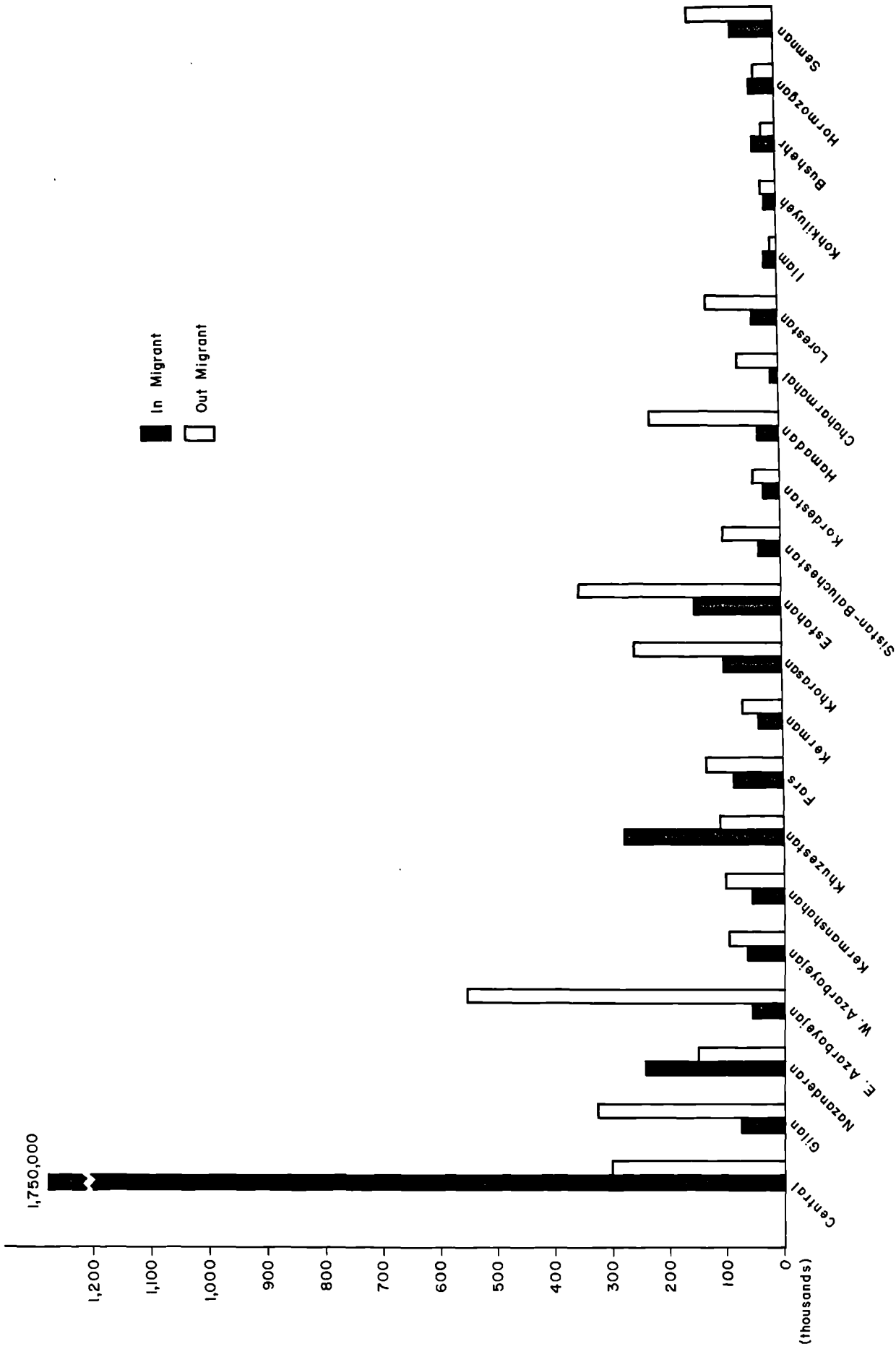

Figure 2.8 Iran: Number of in-migrants and out-migrants of Ostans, 1976.

1,879 or 0.1 per cent of the total out-migrants, in 1966 and 9,155 or 0.3 per cent in 1976, showed the lowest percentage of out-migrants among the 21 Ostans. Figures 2.7 and 2.8 illustrate the number of in-migrants and out-migrants of 21 Ostans and Farmandarikols in 1966 and 21 Ostans in 1976 respectively.

2.3.4 Gross migration

In 1966, Central Ostan with 1,257,955 (31.8 per cent) showed the highest percentage of the total migrants, followed by East Azarbayejan with 398,221 (10.1 per cent), Esfahan 326,241 (8.3 per cent) Mazandaran 285,669 (7.2 per cent) Khorasan 249,367 (6.1 per cent) and Khuzestan with 237,745 (6.0 per cent) of the total migrants. The remaining 15 Ostans or Farmandarikols altogether accounted for only 30.2 per cent of the total migrants. It is worth noting that the percentage of the total migrants of Central Ostan was higher than that of these 15 Ostans or Farmandarikols combined (31.8 and 30.2, respectively). Ilam, with only 7,166 migrants, showed the lowest percentage of the total migrants (0.2 per cent).

Total inter-Ostan migrants increased from 3,948,472 in 1966 to 6,474,856 in 1976 of which 2,044,153 or 31.5 per cent (the highest percentage) belonged to Central Ostan. East Azarbayejan with 606,952 (9.3 per cent) and Esfahan with 499,850 (7.7 per cent) were placed after Central Ostan. Among the remaining 18 Ostans, the percentage of the total migrants varied from 0.4 in Ilam to 6.0 in Khuzestan and Gilan.

2.3.5 Net migration

In 1966, 7 out of 21 Ostans or Farmandarikols, and in 1976, 6 out of 21 Ostans experienced net in-migration, the remaining 14 Ostans or Farmandarikols in 1966 and 15 Ostans in 1976, thus can be recognized as Ostans of net out-migration.

In terms of the volume of net in-migration, apart from Central Ostan which experienced tremendous net in-migration (983,441 or 76.0 per cent of the total in-migrants in 1966 and 1,456,071 or 84.1 per cent in 1976) the remaining Ostans of net in-migration can be classified into two groups. The first group consisted of Khuzestan and Mazandaran with a moderate net in-migration (10.0 and 13.0 per cent of total net in-migrants respectively. The second group consisted of Ostans with a very low percentage of net in-migrants (Ports and Islands of Oman Sea, Ilam Kohkiluyeh, West Abarbayejan) in 1966 with less than 1.0 per cent of the total net in-migrants and Bushehr, Hormozgan, Ilam in 1976 which accounted for only 1.5 per cent of the total net in-migrants.

In 1966, among the 14 Ostans of net out-migration, East Azarbayejan was the main loser, with 334,047 (25.8 per cent) of the total net out-migrants, followed by Esfahan with 256,647 (19.8 per cent), Gilan 161,040 (12.4 per cent), Hamadan 156,907 (12.1 per cent) and Khorasan with 130,937 (10.1 per cent) of the total net out-migrants. The remaining 9 losing Ostans or Farmandarikols accounted for less than 20.0 per cent of the total net out-migrants while, as stated earlier, East Azarbayejan Ostan, alone accounted for more than 25.0 per cent of the total net out-migrants. Among the 14 losing Ostans and Farmandarikols, Kordestan, with only 236 net out-migrants, showed the lowest percentage of net out-migration

(0.02 per cent). Figure 2.9 shows Ostans and Farmandarikols population change in Iran through migration in 1966. In order to show the change in the volume of net-migration of 21 Ostans between 1966 and 1976, the number of net in-migrants and net out-migrants of Ostans in 1976 is illustrated in Figure 2.10. Comparing Figure 2.10 with Figure 2.9 indicates that there were considerable changes in the proportion as well as in the percentages of net in- and out-migrants of Ostans in the 1966-1976 intercensal period. In 1976, net in-migrants of Central Ostan exceeded 1,400,000 (84.0 per cent of the total net in-migrants). As in 1966, in 1976 Central Ostan ranked first among gaining Ostans. Khuzestan with 154,847 (8.9 per cent) and Mazandaran with 91,345 (5.3 per cent) of the total net in-migrants, were placed after Central Ostan. It should be mentioned here that the number of net in-migrants of Mazandaran decreased by 76,372 or 45.5 per cent between 1966 and 1976. Due to this significant decrease Mazandaran, which ranked second after Central Ostan in 1966, was replaced by Khuzestan in 1976. The remaining gaining Ostans (Bushehr, Ilam, Hormozgan) accounted for only 1.5 per cent of the total net in-migrants.

There were also remarkable changes in the proportion and percentage of net out-migrants of losing Ostans between 1966 and 1976. The number of net out-migrants of East Azarbayejan increased by 153,219 or 31.4 per cent during the 1966-1976 inter-censal period and had the highest percentage of net out-migrants among the losing Ostans, with 487,226 (28.1 per cent of the total), followed by Gilan with 251,288 (14.5 per cent), Hamadan 202,476 (11.7 per cent) Esfahan 194,264 (11.2 per cent) and Khorasan 159,349 (9.2 per cent) of the total net out-migrants. The percentage of the net out-migration among the remaining 10 losing Ostans varied from 0.3 in Kohkiluyeh to 4.8 in Lorestan.

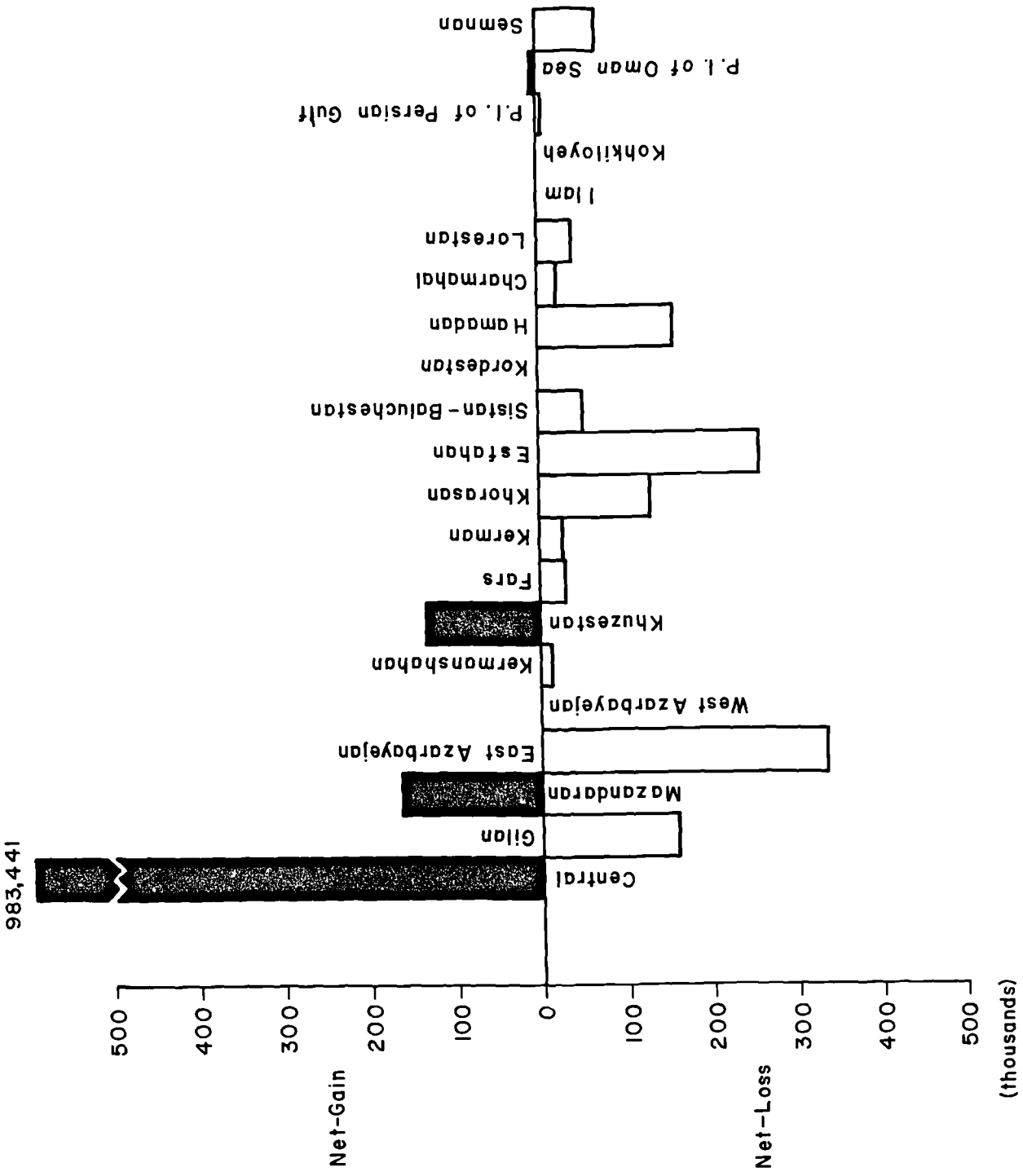

Figure 2.9 Iran: Ostan and Farmandarikol population change through net migration, 1966.

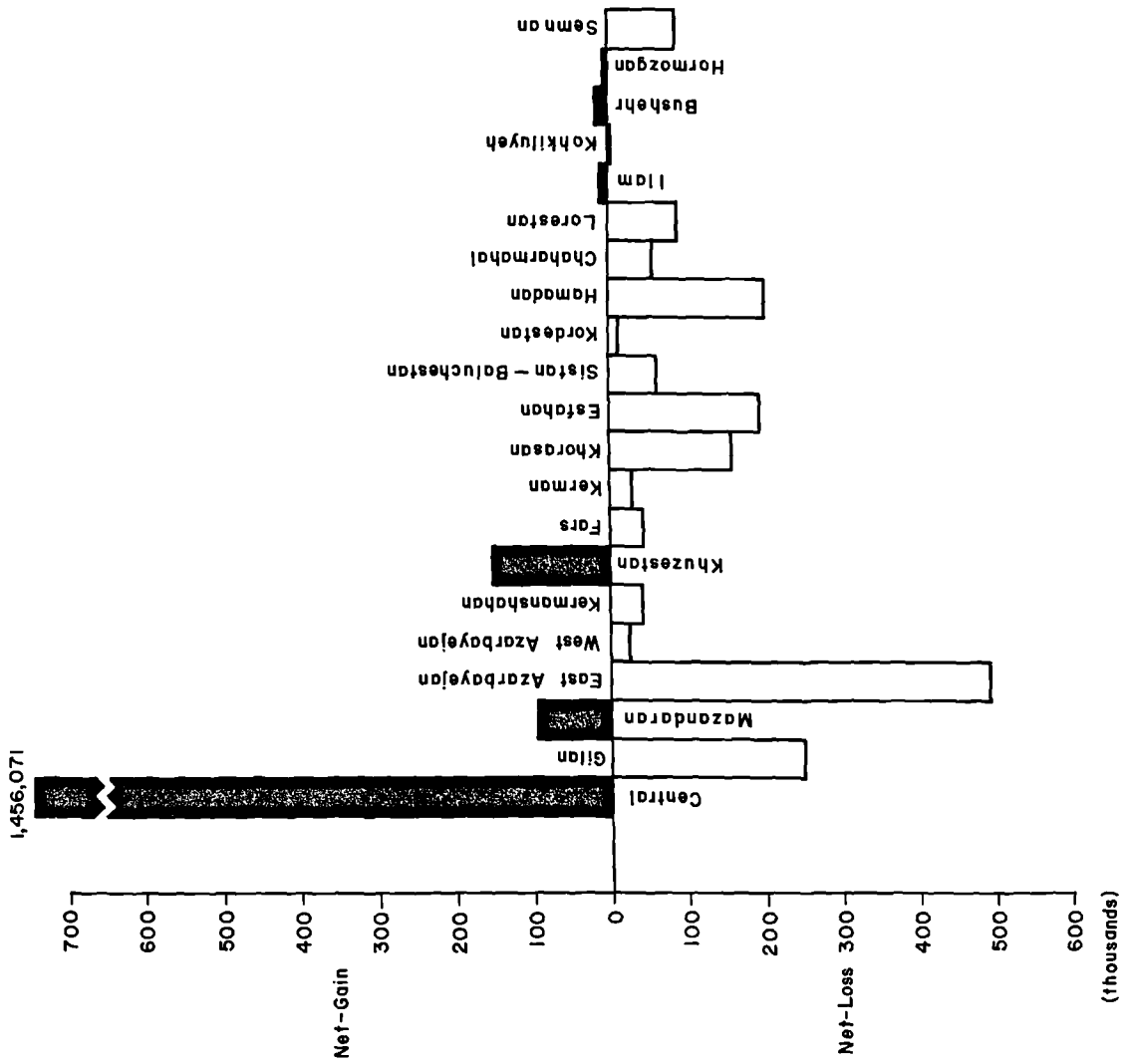

Figure 2.10 Iran: Ostan population change through net migration, 1976.

2.3.6 Migration rates

Tables 2.11 and 2.12, also show the gross and net migration rates for the Ostans of Iran in 1966 and 1976 respectively, thus taking account of the variations in the size of the resident population including inter-Shahrestan migrants who did not cross the Ostan's boundaries.

In 1966, gross migration rates ranged from 48.4 per 1000 in Ilam to 443.0 per 1000 in Semnan, followed by Central Ostan (252.6), Hamadan (213.5), Esfahan (191.5), Sistan-Baluchestan (182.6), Mazandaran (155.0), East Azarbayejan (153.4) and Khuzestan with 150.6 per 1000.

Comparing the gross migration rates of 1966 with those of 1976, indicates an increase in the rates of all 21 Ostans during the intercensal period. The highest rate of gross migration belonged to Semnan Ostan (458.7 per 1000). Central Ostan with 293.6, Hamadan with 214.8 per 1000 had the next highest rates of gross migration, in 1976. Gross migration rates for the remaining 17 Ostans ranged from 94.0 per 1000 in Kordestan to 204.4 per 1000 in Chaharmahal. It should be added that the high gross migration rates of Central Ostan, Mazandaran and Khuzestan were due mainly to in-migration while those of Semnan, Hamadan, Sistan-Baluchestan and East Azarbayejan were due principally to their out-migration.

2.3.7 Net in-migration rates

In 1966, 7 out of 21 Ostans or Farmandarikols showed positive net change in their population due to in-migration. The net in-migration rates ranged from a very low 0.2 per 1000 in West Azarbayejan to 197.6 per 1000 in Central Ostan. Thus the highest net in-migration rate belonged to Central Ostan (197.6). Mazandaran with 91.0 per

1000 and Khuzestan with 84.0 per 1000, were placed after Central Ostan. The lowest rate of net in-migration belonged to West Azarbayejan (0.2 per 1000). Kohkiluyeh, Ports and Islands of Oman Sea and Ilam also showed low net in-migration rates (2.0, 15.0, 23.0 per 1000 respectively).

In 1976, among 6 Ostans which showed positive net change in their population due to in-migration, Central Ostan again had the highest rate of net in-migration (209.1 per 1000), followed by Khuzestan (70.7), Bushehr (41.7), Mazandaran and Ilam with 38.2 per 1000 each. Thus Mazandaran and Khuzestan showed a decrease in their net in-migration rates, while Central Ostan, Ilam and Hormozgan experienced an increase in their net in-migration rates between 1966 and 1976.

2.3.8 Net out-migration rates

In 1966, among the 14 Ostans or Farmandarikols which showed negative net change in their population due to out-migration, Semnan had the highest rate of net out-migration (330.0 per 1000), followed by Hamadan, 176.4, Esfahan 150.6, East Azarbayejan 128.4 and Sistan-Baluchestan 113.6 per 1000. The remaining 9 Ostans or Farmandarikols showed lower net out-migration rates and the rates ranged from a very low 0.4 per 1000 in Kordestan to 92.0 per 1000 in Gilan.

In 1976, Hamadan showed the highest net out-migration rate (186.0 per 1000) and Semnan, which had the highest rate in 1966, in 1976 with a rate of 162.3 per 1000 was placed after Hamadan, followed by Chaharmahal (158.2) and East Azarbayejan (152.2 per 1000). Among the remaining 11 Ostans, rates of net out-migration ranged from 16.0 per 1000 in Kordestan to 116.2 in Gilan. In both 1966 and 1976, Kordestan showed the lowest rate of net out-migration among losing Ostans.

2.3.9 Ratio of net to gross migration

Tables 2.11 and 2.12 also present the ratios of net to gross migration for 21 Ostans and Farmandarikols in 1966 and 21 Ostans in 1976 respectively.

In 1966, among 7 Ostans or Farmandarikols which experienced net in-migration, the highest net to gross ratio belonged to Central Ostan (78.2). The ratio of net to gross for Mazandaran and Khuzestan which were placed after Central Ostan was 58.7 and 55.8 respectively. For the remaining 4 Ostans of net in-migration, ratios varied from a very low of 0.02 for Kohkiluyeh to 47.5 for Ilam.

In 1976, among the 6 gaining Ostans, Central Ostan, again had the highest ratio of net to gross migration followed by Khuzestan (39.2) Ilam (33.8), Bushehr (24.2),Mazandaran (23.7) and Hormozgan (5.4).

In 1966, among 14 Ostans or Farmandarikols which experienced net out-migration, East Azarbayejan showed the highest ratio (83.9) followed by Hamadan (82.6) Esfahan (78.6) and Semnan (76.2). The ratios of net to gross migration for the remaining 10 Ostans or Farmandarikols varied from 0.5 for Kordestan to 68.1 for Gilan.

In 1976, East Azarbayejan again had the highest ratio among the losing Ostans (80.2),followed by Chaharmahal (77.3) and Hamadan (72.1). Among the remaining 12 losing Ostans, ratios varied from 16.7 for West Azarbayejan to 63.9 for Gilan. Overall, both in 1966 and 1976, those Ostans which experienced net out-migration showed relatively high ratios of net to gross migration

2.4 Net intercensal migration 1966-1976

In order to show the extent to which the population of Ostans is affected by net migration between 1966 and 1976, an attempt is made in this section to measure the volume of net intercensal migration for 21 Ostans. In the absence of data on the age distribution of inter-Ostan migrants, which are essential in estimation of net intercensal migration, it is assumed that the ten-year survival ratio of out-born persons is equal to that of in-born persons, and that both equal 0.74 (the overall census survival ratio for Iran between 1966-1976). Using the method suggested in Methods of Measuring Internal Migration, (United Nations, 1970), the net intercensal migration for 21 Ostans of the country is calculated and presented in Table 2.13. According to Table 2.13, Central Ostan had a net gain of 728,324, Khuzestan with 56,672 and Bushehr with 17,926 had the next largest number of net intercensal migrants, while Ilam and Hormozgan gained only 6,892 and 405 migrants respectively. In the 1966-1976 intercensal period, the remaining 16 Ostans showed a net loss. As might be expected, East Azarbayejan, with a net loss of 240,071, ranked first among these 16 Ostans, followed by Gilan with 132,119 and Hamadan with 86,365 net loss. Among the remaining 13 Ostans, net loss varied from 4,343 in Esfahan to 62,455 in Khorasan. The number of 1966-1976 net intercensal migrants by Ostan is illustrated in Figure 2.11.

Examination of the patterns of net intercensal migration reveals that a large number of the Ostans lost a significant proportion of their population in favour of a small number of gaining Ostans in the intercensal period. This is due mainly to differences between these two groups of Ostans in terms of socio-economic and environmental conditions.

TABLE 2.13 : ESTIMATED NET-INTERCENSAL MIGRATION, BY OSTAN, 1966-1976

	Ostan	In-Migrants		Out-Migrants		Net Intercensal Migration 1966 - 1976		
		1966	1976	1966	1976	Among Out-Born	Among In-Born	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Central	1,120,698	1,750,112	137,257	294,041	920,795	-192,471	+728,324
2	Gilan	37,601	70,974	198,641	322,262	43,149	-175,268	-132,119
3	Mazandaran	226,693	237,828	58,976	146,483	70,075	-102,841	- 32,766
4	E.Azarbayejan	32,087	59,843	366,134	547,109	36,099	-276,170	-240,071
5	W.Azarbayejan	45,229	61,353	44,961	86,059	27,883	- 52,789	- 24,906
6	Kermanshahan	37,266	59,590	48,398	95,150	32,013	- 59,335	- 27,322
7	Khuzestan	185,207	274,616	52,538	119,769	137,563	- 80,891	+ 56,672
8	Fars	46,111	87,394	75,084	128,618	53,271	- 73,056	- 19,785
9	Kerman	16,714	39,972	44,149	67,055	27,604	- 34,385	- 6,781
10	Khorasan	59,215	99,770	190,152	259,119	55,951	-118,406	- 62,455
11	Esfahan	34,797	152,793	291,444	347,057	127,043	-131,388	- 4,343
12	Sistan-Baluchestan	15,679	33,970	67,394	98,279	22,367	- 48,407	- 26,040
13	Kordestan	20,751	30,502	20,987	43,091	15,146	- 27,561	- 12,415
14	Hamadan	16,513	38,996	173,420	241,472	26,776	-113,141	- 86,365
15	Chaharmahal	5,735	9,126	26,635	71,516	4,882	- 51,806	- 46,924
16	Lorestan	25,689	40,732	65,623	123,567	21,722	- 75,006	- 53,284
17	Ilam	5,287	18,568	1,879	9,155	14,656	- 7,764	+ 6,892
18	Kohkiluyeh	8,567	17,081	8,237	22,305	10,741	- 16,210	- 5,469
19	Bushehr	10,832	37,148	15,432	22,626	29,132	- 11,206	+ 17,926
20	Hormozgan	12,845	44,141	7,635	39,881	34,636	- 34,231	+ 405
21	Semnan	10,711	72,919	79,260	152,815	64,993	- 94,163	- 29,170

Column (6) = Col. (3) - 0.74 x Col.(2); Column (7) = Col. (4) x 0.74 - Col.(5). Column (8) = Col. (6) + Col. (7)

Source: Tables 2.11, 2.12.

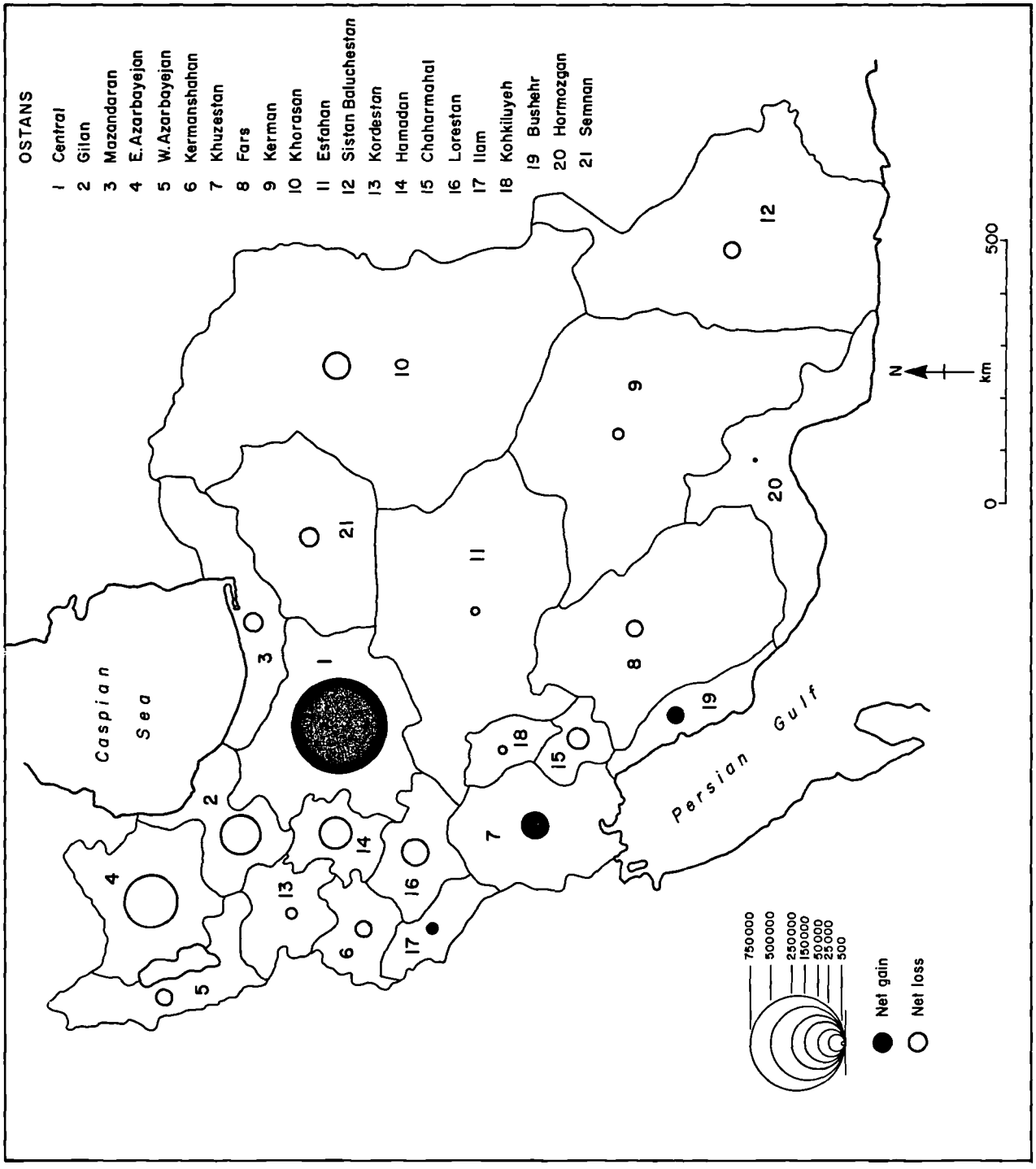

Figure 2.11 Iran: The number of 1966-1976 net intercensal migrants by Ostan.

2.5 Characteristics of the major gaining and losing Ostans

The foregoing analysis of the inter-Ostan migration and examination of the 1966-1976 net intercensal migration provides a background for further explanation of socio-economic, demographic and many other conditions of the Ostans in relation to the patterns of inter-Ostan migration. Overall, the considerable increase in the number of inter-Ostan migrants in Iran on the one hand, and the ever-increasing attraction of certain Ostans in absorbing migrants on the other hand, indicates the concentration of various economic, social and educational facilities in those Ostans and the lack of such facilities in the others. In general, examination of the patterns of inter-Ostan migration in Iran suggest the following points:

1. A small number of Ostans (Central, Khuzestan, Mazandaran) attracted nearly 90.0 per cent of the total inter-Ostan migrants.

2. In all, one third of the Ostans can be recognised as the Ostans of net in-migration.

3. There were massive differences between gaining Ostans in terms of the numbers of net in-migrants.

4. Central Ostan showed a clear dominance in attracting migrants from all over the country.

5. A large number of Ostans (15) showed a net loss in their population due to net out-migration.

6. One third of the losing Ostans (5) experienced a heavy net loss (more than 74.0 per cent of the total), East Azarbayejan showed the heaviest net loss.

7. Compared to these major losing Ostans, the remaining 10 losing Ostans showed a moderate net loss (less than 26.0 per cent of the total combined.

8. More than 80.0 per cent of net out-migrants of the main losing Ostan (East Azarbayejan) were attracted by Central Ostan.

Thus it can be concluded that Central Ostan in particular, and East Azarbayejan, Khuzestan, Mazandaran, Esfahan, Gilan to a lesser extent play a great part in the process and patterns of inter-Ostan migration in Iran. Therefore, in the study of internal migration the role of these major gaining and losing Ostans, particularly that of Central Ostan (the main gaining Ostan) and East Azarbayejan (the main losing Ostan) cannot be overemphasized. In this section an attempt is made to explain the major factors involved in the patterns of net-migration of some of these major Ostans of net-migration.

1. Central Ostan, wherein lies the capital city of Tehran, experienced tremendous net in-migration in 1966, (983,441 or more than 76.0 per cent of the total). In 1976, Central Ostan retained its position as the main gaining Ostan, and its net in-migrants increased to 1,456,071 (more than 84.0 per cent of the total). Figures 2.12 and 2.13 illustrate the net-migration of Central Ostan in 1966 and 1976 respectively. Comparing Figure 2.13 to 2.12 not only shows the strong attraction of Central Ostan, but also indicates the significant increase in the volume of net in-migration of this Ostan in the 1966-1976 intercensal period. This implies that, during the intercensal period, the factors influencing in-migrants of Central Ostan were persistent. As Figures 2.12 and 2.13 show, compared to heavy net in-migration flows toward Central Ostan, its

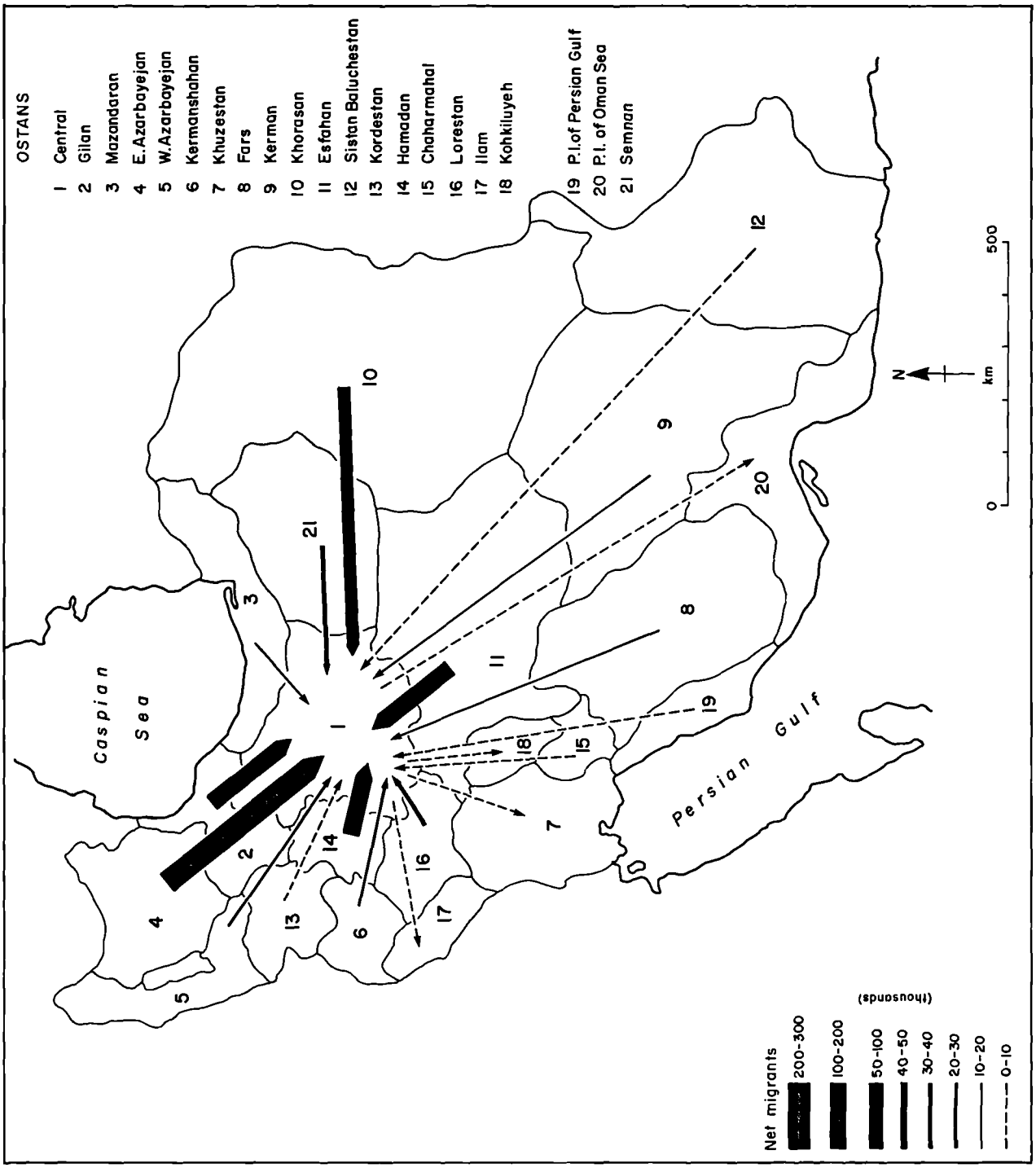

Figure 2.12 Net migration of Central Ostan, 1966.

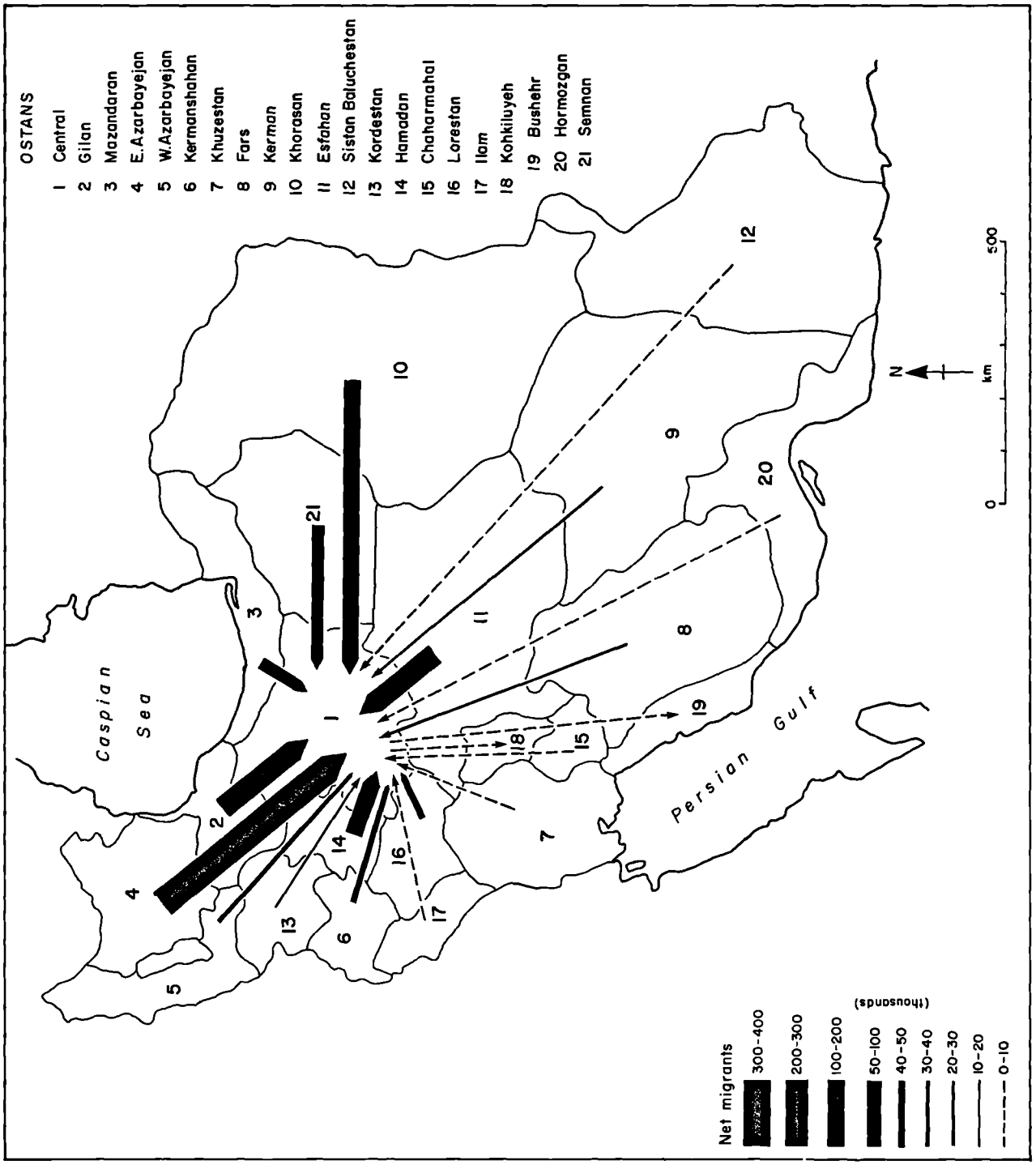

Figure 2.13 Net migration of Central Ostan, 1976.

net out-migration flows were negligible both in number and size. In both 1966 and 1976, the largest net inflow of Central Ostan was from the non-contiguous Ostan of East Azarbayejan.

Central Ostan owes its tremendous net in-migration to the capital city of Tehran, which attracts an overwhelming majority of migrants from all over the country. Although other cities of Central Ostan such as Karaj and Arak share a considerable proportion of the Ostan's net in-migrants, however, Tehran is the main destination for a large majority of the migrants who arrive in the Central Ostan. For example, as Clark, B.D. (1972,p.90) has mentioned, in 1956 the greatest volumes of migration from other Ostans were from Tabriz 94,306, Ardabil 53,033 and Esfahan 50,882 direct to Tehran. In fact, Karaj and other cities of Central Ostan act as temporary residences for a large number of step-wise migrants.

In 1956, 50.0 per cent of Tehran's population was composed of migrants; net in-migrants of Tehran numbered 992,656 during the 1956-1966 decade and 640,429 during the 1966-1976 decade. Thus it can be concluded that Tehran has been growing at the expense of other areas. Since no signs of a decline in this trend are evident, it is highly possible that the trend will continue in the future.

Although there may be a variety of reasons for migration to Tehran, however, the principal reason can be explained by the fact of the city's function as the national capital which has made Tehran the focus of political administrative, economic, social and cultural life. In addition, the concentration of educational institutions and training opportunities and the establishment of industrial estates and the huge investment of capital, mainly in service industries has been a strong incentive for those seeking employment and eventually has led to an ever increasing migration of population

from all over the country to Tehran. This is supported by the fact that, in Tehran, the average wage of labourers in factories is higher than that of similar labourers in the rest of the country.

Although people seeking employment form a considerable proportion of the migrant population of Tehran, there are other groups of migrants with different reasons for migration to the capital. Firoozi, F. (1977, pp. 349,350) has classified the in-migrants of Tehran into three broad groups. First, job-seekers, who are mainly agricultural workers looking for permanent residence or seasonal employment. The job-seekers are mainly attracted to Tehran because of its economic opportunities, and their first-generation participation and assimilation in the cultural life of the city is minimal.

Agricultural workers leave rural areas for Tehran because the equilibrium between the supply and demand for farm workers has radically changed. On the one hand, the general improvement of health and hygiene in the country has affected the villages in various degrees and led to a reduction in the death rate, while the birth rate has remained the same. On the other hand, this surplus population has not appreciably increased the amount of land under cultivation because of the shortage of water and/or the poor quality of land. Consequently, a larger population is left with practically the same amount of land and produce. Furthermore, the farmers are no longer engaged in their traditional handicrafts such as weaving baskets, making clay pottery, operating hand looms, or even making flour. Manufactured goods and machines have reduced the demand for labour in handicraft industries and Tehran is one of the major centres for absorption of surplus farm workers.

The second group has had a relatively comfortable life in

other areas of the country, but among other things has been attracted to Tehran because of the amenities of life which the city provides. This group included politicians, traders, the wealthy, civil servants, military college students and professionals.

The third group of in-migrants are people of diverse background undertaking migration for various specific reasons. The minorities find a greater degree of tolerance and are more readily assimilated in Tehran. Some in-migrants came to the city for the specialized medical facilities the city provides or for other personal reasons such as family strife.

2. East Azarbayejan Ostan. The basic pattern for East Azarbayejan is one of net out-migration. This Ostan has long been known as an Ostan of out-migration, basically contributing population to Tehran. As shown in Figure 2.14, in 1966 East Azarbayejan experienced a heavy loss in its population due to net out-migration and was the main net loser with 334,047 (25.8 per cent of the total net out-migrants). More than 80.0 per cent of net out-migrants of East Azarbayejan (268,283) were received by Central Ostan, and this was the largest net out-migration flow among losing Ostans. As Figure 2.14 shows, Central Ostan was not the only destination for migrants of East Azarbayejan but also West Azarbayejan, Gilan, Mazandaran and to a lesser extent all the remaining Ostans received net out-migrants from East Azarbayejan.

The volume of net out-migration from East Azarbayejan in 1976 is illustrated in Figure 2.15. According to Figure 2.15, the number of net out-migrants of East Azarbayejan showed a remarkable increase during the 1966-1976 decade. Of particular interest was the net out-migration flow towards Central Ostan, which increased from 268,283 in 1966 to 398,704 in 1976.

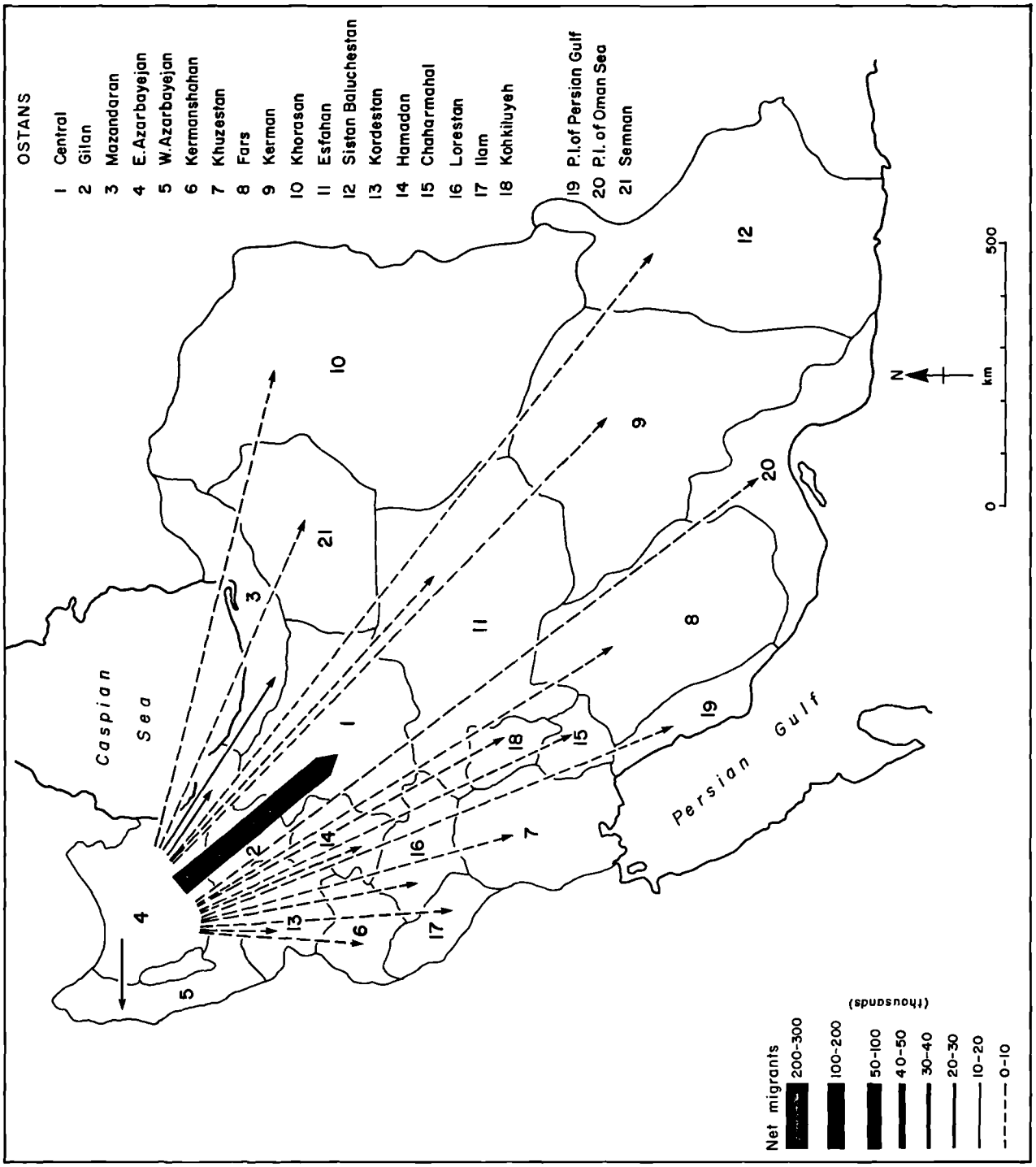

Figure 2.14 Net migration of East Azarbayejan Ostan, 1966.

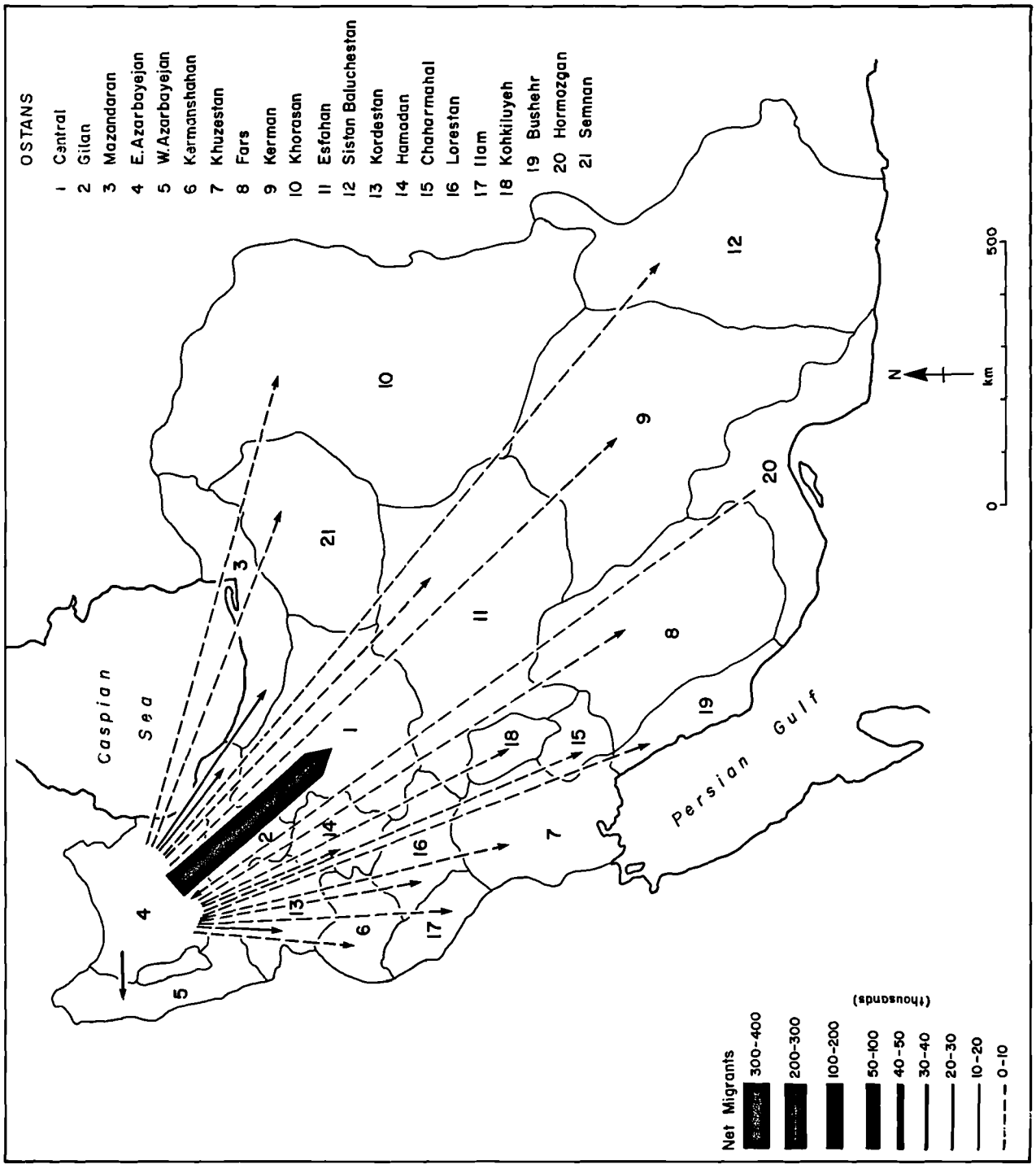

Figure 2.15 Net migration of East Azarbayejan Ostan, 1976.

In 1976, again East Azarbayejan was the main net loser with 487,266 (more than 28.0 per cent of the total net out-migrants). Although there is no reliable research on reasons for these heavy net out-migration flows from this Ostan, however, based on the sample survey conducted in the squatter settlement of Tabriz in 1982 (see Chapter 7) reasons concerning the economic conditions of migrants in one form or another appeared to be prevalent.

Apart from the heavy net loss which East Azarbayejan has experienced since 1956, there have been some major net out-migration flows from this Ostan, particularly to Central Ostan before 1956. More significant out-migration occurred after the Second World War. As Firoozi, F. (1977, p.358) has mentioned, supported by the Soviet Army, which had occupied parts of Iran during the Second World War, a secessionist government was established in Azarbayejan on December 9th, 1945. This government lasted until December 15th, 1946. Throughout the life of the secessionist government and after its termination, the Azarbayejanis migrated from their land to other areas of the country, particularly Tehran, in search of security.

In recent years, particularly after the land reform (1963), a large number of villagers and farmers who did not receive land under the land reform programme left rural areas, mainly for Central Ostan and in particular for Tehran. It should be noted that, since East Azarbayejan was the first Ostan which experienced the land reform, its population, especially rural population, was affected by this programme more than that of any other Ostan.

It should be added that, apart from the heavy net out-migration flows from East Azarbayejan to other Ostans, there have been considerable population interchanges within the Ostan in the last 20 years.

Rural-Urban migration is a common phenomenon in East Azarbayejan and to a great extent has affected the major cities of the Ostan particularly Tabriz City, the Ostan's capital (see Chapter 7).

3. Khuzestan. Since Khuzestan is the main oil region of Iran,the availability of jobs in its various industrial centres has attracted a large number of migrants and the majority of migrants are labourers who are accompanied by their families. In contrast to Central Ostan, Khuzestan attracts local migrants mainly from the neighbouring Ostans of Bushehr, Lorestan, Kohkiluyeh and Chahrmahal. However Khuzestan also attracts a considerable number of migrants from the non-contiguous Ostans of Esfahan and Shiraz.

4. Mazandaran. Mazandaran showed a net gain in both 1966 and 1976. However, the number of net in-migrants of this Ostan decreased in the period of 10 years (1966-1976). The net in-migration pattern for Mazandaran is surprising because of the close proximity of Central Ostan and Tehran with its strong drawing power. This can be explained partly by the availability of agricultural land and facilities which attracted a large number of migrants from the southern Ostan of Sistan-Baluchestan, and partly by the establishment of a number of industrial units, particularly in the textile industry, which offer jobs for migrants.

5. Esfahan. Esfahan experienced a net out-migration of 256,647 in 1966, and was the next main loser after East Azarbayejan. A large number of migrants from Esfahan were received by Central Ostan and Khuzestan. However, due to the establishment of the steel mill of Esfahan, there has been a significant decrease in the number of net out-migrants from Esfahan between 1966 and 1976. Thus the

change in the socio-economic characteristics of the Ostan seems to have changed the pattern of migration and Esfahan Ostan, specially Esfahan City, began to absorb migrants from other Ostans.

2.6 Sex and age structure of migrants

The sex and age structure of resident and migrant populations indicate the extent to which migration is a selective process. Unfortunately, owing to different age group classifications in 1956, strict comparison between the 1956 and the 1966 and 1976 census is not possible. However, an attempt is made to discuss the age structure of migrants in 1956 separately, while the sex and age structure of inter-Ostan as well as inter-Shahrestan migrants based on the 1966 and 1976 censuses will be examined in a comparative manner. It should be noted that, since the final results of the 1976 census on the birth-place of the population seems to be inaccurate, the preliminary result of the 1976 census on the birth-place of the population will be used in this section.

2.6.1 Age structure of migrants in 1956

The total population of Iran as enumerated in the First National census was 18,954,704 of whom 2,081,082 (11.0 per cent) were reported as migrants. According to the 1956 census results, the percentage of migrants who moved to non-contiguous Shahrestans was nearly twice that of migrants who moved to contiguous Shahrestans; the size of the first group was 1,339,987 (64.4 per cent) and the second 741,095 (35.6 per cent) out of a total 2,081,082 migrants (Table 2.14).

Table 2.14 also shows the different age structure of those two groups as well as their numbers. The percentage of children aged 0 - 14 among those who moved between contiguous Shahrestans was

Table 2.14 : Migration Status by Age for Iran, 1956

Age group	Total Population		Non-migrants		Migrants						Born in Foreign Countries		Birth-place not Reported	
					Total		Between Contiguous Shahrestans		Between Non-Contiguous Shaurestans					
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0 - 4	3,347,698	17.7	3,203,320	19.0	141,153	6.8	76,863	10.4	64,290	4.8	1,349	3.0	1,876	13.3
5 - 14	4,645,458	24.5	4,306,340	25.6	333,726	16.0	140,024	18.9	193,702	14.5	3,116	7.0	2,276	17.2
15 - 24	2,917,702	15.4	2,454,183	14.6	455,248	21.9	145,354	19.6	309,894	23.1	5,727	12.8	2,544	18.1
25 - 34	2,904,175	15.3	2,447,416	14.6	442,113	21.2	142,627	19.2	299,486	22.3	12,181	27.2	2,465	17.5
35 - 44	1,947,441	10.3	1,645,652	9.8	291,830	14.0	94,793	12.8	197,037	14.7	8,168	18.2	1,791	12.7
45 - 54	1,446,433	7.6	1,231,005	7.3	207,295	10.0	67,004	9.0	140,291	10.5	6,719	14.9	1,414	10.0
55 - 64	987,127	5.2	852,983	5.1	128,730	6.2	44,785	6.0	84,245	6.3	4,534	10.1	880	6.2
65+	751,607	4.0	668,316	4.0	79,796	3.8	29,529	4.0	50,267	3.7	2,890	6.5	605	4.3
Not reported	7,063	-	5,524	_	1,191	0.1	416	0.1	775	0.1	112	0.3	236	1.7
Total	18,954,704	100	16,814,739	88.7	2,081,082	11.0	741,095	3.9	1,339,987	7.2	44,796	0.2	14,087	-

Source : First National Census of Population and Housing, 1956, Vol.2.

higher than the percentage among those who moved between non-contiguous Shahrestans (29.3 per cent and 19.3 per cent). The age-group 15-24 with 309,894 or 23.1 per cent of the migrants who moved between non-contiguous Shahrestans had the highest percentage, followed by age-group 25-34, with 299,486 or 22.3 per cent, and these two age groups together accounted for more than 45.4 per cent of the migrants who moved between non-contiguous Shahrestans, while the age-group 65+ showed the lowest percentage, (50,262 or 3.7 per cent).

The age-group 15 - 24 also made up the highest percentage of the migrants who moved between contiguous Shahrestans, and accounted for 145,354 or 19.6 per cent of migrants, followed by the age-group 25 - 34, with 142,627 or 19.2 per cent. Thus these two age groups (15 - 24, 25 - 34) together accounted for 38.8 per cent of migrants who moved between contiguous Shahrestans. The lowest percentage belonged to the age-group 65+ (4.0 per cent).

From these figures it can be seen that the percentage of migrants in age-group 15 - 34 who moved between non-contiguous Shahrestans was higher than that of migrants who moved between contiguous Shahrestans (45.4 and 38.8 per cent).

The conclusion can be reached that migrants between contiguous Shahrestans usually moved with their family group, whereas longer distance migrants were usually single people for whom distance was less of a problem and who were looking for better jobs and a higher standard of living.

The movement of population between contiguous and non-contiguous Shahrestans differed from one Ostan to another. In some Ostans the percentage of migrants who moved between contiguous Shahrestans was higher than that of migrants who moved between non-contiguous

Shahrestans elsewhere, the reverse was the case. This can be explained partly by the transportation facilities of the Ostans and partly by the degree of satisfaction of migrants with their selected destination.

2.6.2 Sex and age structure of inter-Ostan and inter-Shahrestan migrants, 1966 and 1976

Of the total population of Iran in 1976, 28,431,456 (84.46 per cent) were reported as non-migrants in that they were born in the Shahrestan of enumeration. 1,784,560 (5.3 per cent) had been born in another Shahrestan of the Ostan in which they were enumerated and 3,261,475 (9.68 per cent) were born outside the Ostan of enumeration. Thus the number of people who crossed Ostan boundaries (inter-Ostan migrants) and who moved within Ostans (inter-Shahrestan migrants) accounted for 5,046,035 (14.98 per cent) of the total (33,662,176) population of Iran in 1976 (Table 2.15).

As Table 2.16 shows, the age-group 20 - 24 which accounted for 2,808,756 or 8.34 per cent of the total population of Iran, had the highest percentage of inter-Ostan migrants and accounted for 581,404 or 16.3 per cent of the total 3,261,475 inter-Ostan migrants in 1976, while the age-groups 0 - 4 and 5 - 9 which together accounted for nearly one third (32.1 per cent) of the total population of Iran, accounted for only 10.69 per cent of inter-Ostan migrants.

Table 2.1 5 : Place of Birth of the Population by Age-Group, Iran 1976

Age group	Total population	Born in Shahrestan of enumeration		Born in other Shahrestan of the same Ostan		Born in other Ostans		Born in Foreign Countries	
	No.	No.	%	No.	%	No.	%	No.	%
0 - 4	5,403,718	5,139,517	95.11	107,125	1.98	144,846	2.68	12,230	0.22
5 - 9	5,253,080	4,880,724	92.91	144,574	2.75	203,398	3.87	24,384	0.46
10 - 14	4,301,231	3,913,286	90,98	149,807	3.48	217,764	5.06	20,374	0.47
15 - 19	3,609,084	3,011,611	83,44	202,716	5.61	378,696	10.49	16,061	0.44
20 - 24	2,808,756	2,049,554	72.97	212,141	7.55	531,504	18.92	15,557	0.55
25 - 29	2,105,726	1,560,273	74.09	173,152	8.22	355,238	16.87	17,063	0.81
30 - 34	1,701,695	1,260,383	74.05	142,057	8.34	282,643	16.60	16,612	0.97
35 - 39	1,623,273	1,215,992	74.90	139,207	8.57	254,378	15.67	13,696	0.84
40 - 44	1,667,748	1,288,533	77.26	133,818	8.02	232,826	13.96	12,571	0.75
45 - 49	1,388,549	1,084,614	78.11	107,424	7.73	185,672	13.37	10,839	0.78
50 - 54	1,325,800	1,052,252	79.36	96,926	7.31	167,422	12.62	9,200	0.69
55 - 59	706,827	552,696	78.19	52,432	7.41	96,607	13.66	5,092	0.72
60 - 64	581,199	463,930	79.82	40,933	7.04	73,182	12.59	3,154	0.54
65+	1,185,490	958,091	80.81	82,248	6.93	137,299	11.58	7,852	0.66
Total	33,662,176	28,431,456	84.46	1,784,560	5.30	3,261,475	9.68	184,685	0.54

Source : Preliminary Results of 1965 Census of Population and Housing.

Table 2.16 : Number and Percentage of Population of Iran by Age-Group and Place of Birth, 1976

Age Group	Total Population		Born in Shahrestan of enumeration		Borm in other Shahrestan of the same Ostan		Born in other Ostans		Born in Foreign Countries	
	No	%	No	%	No	%	No	%	No	%
0 - 4	5,403,718	16.05	5,139,517	18.08	107,125	6.0	144,846	4.45	12,230	6.62
5 - 9	5,253,080	15.6	4,880,724	17.17	144,574	8.1	203,398	6.24	24,384	13.2
10 - 14	4,301,231	12.77	3,913,286	13.76	149,807	8.4	217,764	6.68	20,374	11.03
15 - 19	3,609,084	10.72	3,011,311	10.6	202,716	11.36	378,696	11.61	16,061	8.7
20 - 24	2,808,756	8.34	2,049,554	7.2	212,141	11.89	531,504	16.3	15,557	8.42
25 - 29	2,105,726	6.25	1,560,273	5.5	173,152	9.7	355,238	10.9	17,063	9.24
30 - 34	1,701,695	5.06	1,260,383	4.43	142,057	7.96	282,643	8.67	16,612	9.0
35 - 39	1,623,273	4.83	1,215,992	4.27	139,207	7.8	254,378	7.8	13,696	7.41
40 - 44	1,667,748	4.95	1,288,533	4.53	133,818	7.5	232,826	7.14	12,571	6.8
45 - 49	1,388,549	4.13	1,084,614	3.8	107,424	6.0	185,672	5.7	10,839	6.87
50 - 54	1,325,800	3.94	1,052,252	3.7	96,926	5.43	167,422	5.13	9,200	4.98
55 - 59	706,827	2.1	552,696	1.94	52,432	2.94	96,607	2.96	5,092	2.76
60 - 64	581,199	1.73	463,930	1.63	40,933	2.3	73,182	2.24	3,154	1.7
65+	1,185,490	3.52	958,091	3.36	82,248	4.6	137,299	4.2	7,852	4.25
Total	33,662,176	100.0	28,431,456	100.0	1,784,560	100.0	3,261,475	100.0	184,685	100.0

Source: Preliminary Results of 1976 Census of Population and Housing.

This indicates that inter-Ostan migration in Iran was dominated by adults of working age. Among different age-groups, the age group 60 - 64 formed the lowest proportion of the total population (1.73 per cent), as well as of inter-Ostan migrants (2.24 per cent), in 1976.

Comparing data presented in Table 2.15 with similar data for 1966 (Table 2.17) shows that there has been an increase in the number and percentage of inter-Ostan as well as inter-Shahrestan (township) migrants over a period of 10 years. In 1966, 12.84 per cent of the total population were reported as migrants, while, as indicated earlier, the corresponding percentage for 1976 was 14.98 per cent. The proportion of inter-Ostan migrants increased by nearly 2 per cent, while that of inter-Shahrestan migrants increased by only 0.39 per cent over a period of 10 years (1966 - 1976).

Table 2.18 shows that,among the different age-groups, the age-group 20 - 24 had the highest percentage of inter-Ostan (13.8 per cent), as well as inter-Shahrestan (township) migrants (10.72 per cent), in 1966, as in 1976. The age-group 55-59 had the lowest proportion of both inter-Ostan and inter-Shahrestan migrants, 2.36 per cent and 2.32 per cent respectively. It should be added that, as in 1976, the age-group 0-4 had the highest percentage of the total population (17.68 per cent), but accounted for only 4.56 per cent of inter-provincial migrants in 1966.

2.6.3 Patterns by Sex

In 1966 and 1976 adult migration was dominated by males, but migration of those below the age of 15 was divided evenly between the two sexes.

Table 2.17 : Place of Birth of the Population by Age-Group, Iran 1966

Age group	Total population	Born in Shahrestan of enumeration		Born in other Shahrestan of the same Ostan		Born in other Ostans		Born in Foreign Countries	
	No.	No.	%	No.	%	No.	%	No.	%
0 - 4	4,436,921	4,258,124	96.0	83,804	1.9	90,899	2.0	4,094	0.1
5 - 9	4,106,158	3,847,423	93.7	111,929	2.7	142,537	3.5	4,269	0.1
10 - 14	3,017,250	2,739,896	90.8	116,491	3.9	157,976	5.2	2,887	0.1
15 - 19	2,129,036	1,819,089	85.4	118,793	5.6	189,052	8.9	2,102	0.1
20 - 24	1,682,161	1,272 417	75.6	132,225	7.9	274,642	16.3	2,877	0.2
25 - 29	1,649,672	1,299,788	78.8	122,203	7.4	223,550	13.5	4,131	0.3
30 - 34	1,668,046	1,332,976	79.9	119,401	7.1	209,610	12.6	6,059	0.4
35 - 39	1,418,239	1,135,710	80.1	100,858	7.1	174,398	12.3	7,273	0.5
40 - 44	1,321,050	1,076,997	81.5	88,756	6.7	148,800	11.3	6,497	0.5
45 - 49	843,608	678,382	8.4	60,896	7.2	100,223	11.9	4,107	0.5
50 - 54	740,839	603,596	81.5	51,285	6.9	82,595	11.1	3,363	0.5
55 - 59	437,901	349,929	81.8	28,620	6.7	47,046	11.1	2,306	0.4
60 - 64	669,937	559,316	83.5	41,953	6.3	65,778	9.8	2,890	0.4
65+	968,105	823,965	85.1	56,142	5.8	83,738	8.6	4,260	0.5
Total	25,087,923	21,797,608	86.88	1,233,356	4.91	1,990,844	7.93	57,115	0.227

Source: Second National Census of Population and Housing, 1966, Vol.168.

Table 2.18 : Number and Percentage of Population of Iran by Age-Group and Place of Birth, 1966

Age Group	Total Population		Born in Shahrestan of enumeration		Born in other Shahrestan of the same Ostan		Born in other Ostans		Born in Foreign Countries	
	No.	%	No.	%	No.	%	No.	%	No.	%
0 - 4	4,436,921	17.68	4,258,124	19.53	83,804	6.79	90,899	4.56	4,094	7.16
5 - 9	4,106,158	16.37	3,847,423	17.65	111,929	9.07	142,537	7.16	4,269	7.47
10 - 14	3,017,250	12.03	2,739,896	12.57	116,491	9.45	157,976	7.93	2,887	5.05
15 - 19	2,129,036	8.49	1,819,089	8.34	118,793	9.63	189,052	9.5	2,102	3.68
20 - 24	1,682,161	6.7	1,272,417	5.84	132,225	10.72	274,642	13.8	2,877	5.03
25 - 29	1,649,672	6.58	1,299,788	5.96	122,203	9.9	223,550	11.23	4,131	7.23
30 - 34	1,668,046	6.65	1,332,976	6.12	119,401	9.68	209,610	10.52	6,059	10.6
35 - 39	1,418,239	5.65	1,135,710	5.21	100,858	8.18	174,398	8.76	7,273	12.74
40 - 44	1,321,050	5.26	1,076,997	4.94	88,756	7.2	148,800	7.47	6,497	11.37
45 - 49	843,608	3.36	678,382	3.11	60,896	4.94	100,223	5.03	4,107	7.19
50 - 54	740,839	2.95	603,596	2.77	51,285	4.16	82,595	4.15	3,363	5.89
55 - 59	437,901	1.75	349,929	1.6	28,620	2.32	47,046	2.36	2,306	4.03
60 - 64	669,937	2.67	559,316	2.56	41,953	3.4	65,778	3.3	2,890	5.06
65+	968,105	3.86	823,965	3.78	56,142	4.55	83,738	4.2	4,260	7.45
Total	25,087,923	100.0	21,797,608	100.0	1,233,356	100.0	1,990,844	100.0	57,115	100.0

Source: Second National Census of Population and Housing, 1966, Vol.168.

In 1966, of 12,981,665 males in the total population of Iran, 1,771,484 (13.64 per cent) were reported as migrants, of whom 660,239 (5.08 per cent) were inter-Shahrestan (township) migrants and 1,111,245 (8.56 per cent) were inter-Ostan migrants (Table 2.19).

Of the total 12,097,258 female population in 1966, 573,117 (4.73 per cent) were recorded as inter-Shahrestan (township) migrants, and 879,599 (7.27 per cent) were inter-Ostan migrants, (Table 2.20). Comparing the number of male and female migrants in 1966 to those of in 1976 shows that, while there has been no considerable increase in percentage of inter-Shahrestan migrants (both sexes), inter-Ostan migrants increased by 2.13 per cent for males and 1.35 per cent for females over a period of 10 years (1966-1976). As noted earlier, adult migration was dominated by males, particularly in terms of inter-Ostan migration: for instance the highest percentage of migration in 1966, 1976 can be seen in age-group 20-24 of male population, 15.1 per cent, 18.0 per cent respectively (Tables 2.21, 2.22) while corresponding percentage for females in the same age-group in 1966 was 12.0 per cent and in 1976 was 14.04 per cent (Tables 2.23, 2.24).

2.6.4 Sex ratio

Tables 2.25 and 2.26 show the sex ratios of the population of Iran by age group and place of birth in 1966, 1976.

Except in the case of the age-group 15-19, inter-Shahrestan migration was dominated by male migrants. In terms of inter-Ostan migration, all the age groups showed the dominance of male migrants. Sex ratios ranged from 103.7 males per 100 females in the age-group 15 - 19 to 158.8 in the age-group 20 - 24.

Table 2.19 : Place of Birth of the Male Population by Age-Group, Iran 1966

Age Group	Total Population	Born in Shahrestan of enumeration		Born in other Shahrestan of the same Ostan		Born in other Ostans		Born in Foreign Countries	
	No.	No.	%	No.	%	No.	%	No.	%
0 - 4	2,307,723	2,214,801	96.0	43,295	1.9	47,587	2.0	2,040	0.1
5 - 9	2,127,704	1,992,566	93.6	58,201	2.8	74,655	3.5	2,182	0.1
10 - 14	1,593,835	1,445,544	90.7	62,494	3.9	84,377	5.3	1,420	0.1
15 - 19	1,060,029	903,561	85.2	59,245	5.6	96,247	9.1	976	0.1
20 - 24	792,896	552,812	69.7	71,139	9.0	167,706	21.1	1,239	0.2
25 - 29	801,665	611,247	76.2	64,330	8.1	124,443	15.5	1,845	0.2
30 - 34	863,316	675,315	87.2	65,285	7.6	119,801	13.9	2,915	0.3
35 - 39	763,863	604,770	79.2	55,794	7.3	99,598	13.0	3,701	0.5
40 - 44	737,845	593,053	80.4	51,404	6.9	89,766	12.2	3,622	0.5
45 - 49	479,395	380,083	79.3	35,972	7.5	61,138	13.8	2,202	0.4
50 - 54	370,469	300,446	81.1	26,064	7.1	42,356	11.4	1,603	0.4
55 - 59	223,539	182,687	81.7	15,225	6.8	24,594	11.0	1,032	0.5
60 - 64	344,198	286,787	83.3	21,871	6.4	34,146	9.9	1,294	0.4
65+	515,188	438,302	85.1	29,820	5.8	44,831	8.7	2,235	0.3
Total	12,981,665	11,181,974	86.13	660,239	5.08	1,111,245	8.56	28,207	0.21

Source: Second National Census of Population and Housing, 1966, Vol.168.

Table 2.20 : Place of Birth of the Female Population by Age-Group, Iran 1966

Age Group	Total Population	Born in Shahrestan of enumeration		Born in other Shahrestan of the same Ostan		Born in other Ostans		Born in foreign Countries	
		No.	%	No.	%	No.	%	No.	%
0 - 4	2,129,198	2,043,323	96.0	40,509	1.9	43,312	2.0	2,054	0.1
5 - 9	1,978,454	1,854,857	93.8	53,628	2.7	67,882	3.4	2,087	0.1
10 - 14	1,423,415	1,294,352	90.9	53,997	3.8	73,599	3.2	1,467	0.1
15 - 19	1,069,007	915,528	85.6	59,548	5.6	92,805	8.7	1,126	0.1
20 - 24	889,265	719,605	80.9	61,086	6.9	106,936	12.0	1,638	0.2
25 - 29	848,007	688,441	81.2	57,873	6.8	99,107	11.6	2,486	0.4
30 - 34	804,730	657,661	81.7	54,116	6.7	89,809	11.2	3,144	0.4
35 - 39	654,376	530,940	81.1	45,064	6.9	74,800	11.5	3,573	0.5
40 - 44	583,205	483,944	83.1	38,352	6.2	59,034	10.2	2,825	0.5
45 - 49	364,213	298,299	81.9	24,924	6.8	39,085	10.7	1,905	0.6
50 - 54	270,370	203,150	81.9	25,221	6.8	40,229	10.9	1,760	0.4
55 - 59	204,362	167,242	81.8	13,395	6.6	22,452	11.0	1,273	0.6
60 - 64	325,739	272,529	83.7	20,082	6.2	31,622	9.7	1,496	0.4
65+	452,917	385,662	85.2	26,322	5.8	38,907	8.6	2,025	0.4
Total	12,097,258	10,615,634	87.75	573,117	4.73	879,599	7.27	28,908	0.23

Source: Second National Census of Population and Housing, 1966, Vol.168.

Table 2.21 : Number, Percentage of Male Population of Iran by Age-Group and Place of Birth, 1966

Age group	Total population		Born in Shahrestan of enumeration		Born in other Shahrestan of the same Ostan		Born in other Ostans		Born in Foreign Countries	
	No.	%	No.	%	No.	%	No.	%	No.	%
0 - 4	2,307,723	17.78	2,214,801	19.8	43,295	6.56	47,587	4.28	2,040	7.23
5 - 9	2,127,704	16.4	1,992,566	17.82	58,201	8.81	74,655	6.71	2,182	7.73
10 - 14	1,593,835	12.28	1,445,544	12.93	62,494	9.46	84,377	7.59	1,420	5.03
15 - 19	1,060,029	8.16	903,561	8.08	59,245	8.97	96,247	8.66	976	3.46
20 - 24	792,896	6.1	552,812	4.94	71,139	10.77	167,706	15.1	1,239	4.4
25 - 29	801,665	6.18	611,247	5.47	64,330	9.74	124,443	11.2	1,845	6.54
30 - 34	863,316	6.65	675,315	6.04	65,285	9.89	119,801	10.78	2,915	10.33
35 - 39	763,863	5.88	604,770	5.4	55,794	8.45	99,598	8.96	3,701	13.12
40 - 44	737,845	5.68	593,053	5.3	51,404	7.78	89,766	8.08	3,622	12.84
45 - 49	479,395	3.7	380,083	3.4	35,972	5.45	61,138	5.5	2.202	78.06
50 - 54	370,469	2.85	300,446	2.68	26,064	3.95	42,356	3.81	1,603	5.68
55 - 59	223,539	1.72	128,687	1.15	15,225	2.3	24,594	2.21	1,032	3.66
60 - 64	344,198	2.65	286,787	2.56	21,871	3.31	34,146	3.07	1,294	4.59
65+	515,188	3.97	438,302	3.92	29,820	4.51	44,831	4.03	2.235	7.92
Total	12,981,665	100.0	11,181,974	100.0	660,239	100.0	1,111,245	100.0	28,207	100.0

Source : Second National Census of Population and Housing, 1966, Vol.168.

Table 2.22 : Number, Percentage of Male Population of Iran by Age-Group and Place of Birth, 1976

Age Group	Total Population		Born in Shahrestan of enumeration		Born in other Shahrestan of the same Ostan		Born in other Ostans		Born in Foreign Countries	
	No	%	No	%	No	%	No	%	No	%
0 - 4	2,810,024	16.2	2,671,953	18.5	55,643	5.89	75,961	4.1	6,467	6.45
5 - 9	2,716,512	15.67	2,522,902	17.47	75,776	8.0	105,558	5.7	12,276	12.24
10 - 14	2,260,679	13.04	2,049,776	14.2	80,227	8.49	119,577	6.45	11,099	11.06
15 - 19	1,821,891	10.5	1,482,739	10.27	106,643	11.28	223,810	12.07	8,699	8.68
20 - 24	1,355,584	7.82	908,968	6.3	104,176	11.02	333,908	18.0	8,532	8.5
25 - 29	1,009,213	5.82	721,008	5.0	85,087	9.0	194,221	10.47	8,897	8.87
30 - 34	836,244	4.82	593,820	4.11	75,397	7.98	157,931	8.51	9,096	9.07
35 - 39	823,066	4.74	592,946	4.1	77,718	8.22	144,615	7.8	7,787	7.77
40 - 44	895,015	5.16	676,920	4.69	75,302	7.97	135,269	7.3	7,524	7.5
45 - 49	752,743	4.34	581,750	4.03	60,432	6.4	104,129	5.6	6,432	6.41
50 - 54	728,486	4.2	573,399	3.97	54,588	5.78	95,342	5.14	5,157	5.14
55 - 59	398,077	2.3	309,353	2.14	30,138	3.19	55,555	3.0	3,031	3.02
60 - 64	303,003	1.74	420,683	2.91	22.073	2.34	38,640	2.08	1,607	1.6
65+	626,642	3.61	511,835	3.54	41,666	4.4	69,482	3.74	3,659	3.64
Total	17,337,179	100.0	14,438,052	100.0	944,866	100.0	1,853,998	100.0	100,263	100.0

Source: Preliminary Results of 1976 Census of Population and Housing.

Table 2.23 : Number, Percentage of Female Population of Iran by Age-Group and Place of Birth, 1966

Age Group	Total Population		Born in Shahrestan of enumeration		Born in other Shahrestan of the same Ostan		Born in other Ostans		Born in Foreign Countries	
	No	%	No	%	No	%	No	%	No	%
0 - 4	2,129,198	17.6	2,043,323	19.25	40,509	7.07	43,312	4.92	2,054	7.1
5 - 9	1,978,454	16,35	1,854,867	17.47	53,628	9.36	67,882	7,72	2,087	7.22
10 - 14	1,423,415	11.77	1,294,352	12.2	53,997	9.42	73,599	8,37	1,467	5.07
15 - 19	1,069,007	8.84	915,528	8.62	59,548	10.39	92,805	10.55	1,126	3.9
20 - 24	889,265	7.35	719,605	6.78	61,086	10.66	106,936	12.16	1,638	5.67
25 - 29	848,007	7.0	688,441	6.48	57,873	10.1	99,107	11.27	2,486	8.6
30 - 34	804,730	6.65	657,661	6.2	54,116	9.44	89.809	10.21	3,144	10.87
35 - 39	654,376	5.4	530,940	5.0	45,064	7.86	74,800	8.5	3,573	12.36
40 - 44	583,205	4.82	483,944	4.56	38,352	6.7	59.034	6.71	2,825	9.77
45 - 49	364,213	3.0	298,299	2.8	24,924	4.35	39,085	4.44	1,905	6.59
50 - 54	270,370	2.23	203,150	1.91	25,221	4.4	40,229	4.57	1,760	6.09
55 - 59	204,362	1.69	167,242	1.58	13,395	2.34	22,452	2.55	1,273	4.4
60 - 64	325,739	2.7	272,529	2.57	20,082	3.5	31,622	3.6	1,496	5.17
65+	452,917	3.74	385,662	3.63	26,322	4.6	38,907	4.42	2,025	7.0
Total	12,097,258	100.0	10,615,634	100.0	573,117	100.0	879,599	100.0	28,908	100.0

Source: Second National Census of Population and Housing, 1966, Vol.168.

Table 2.24 : Number, Percentage of Female Population of Iran by Age-Group and Place of Birth, 1976

Age Group	Total Population		Born in Shahrestan of enumeration		Born in other Shahrestan of the same Ostan		Born in other Ostans		Born in Foreign Countries	
	No	%	No	%	No	%	No	%	No	%
0 - 4	2,593,694	15.89	2,467,564	17.63	51,482	6.13	68,885	4.9	5,763	6.82
5 - 9	2,536,568	15.54	2,357,822	16.85	68,798	8.2	97,840	6.95	12,108	14.34
10 - 14	2,040,552	12.5	1,863,510	13.31	69,580	8.29	98,187	6.98	9,275	10.98
15 - 19	1,787,193	10.95	1,528,872	10.92	96,073	11.44	154,886	11.0	7,362	8.72
20 - 24	1,453,172	8.9	1,140,586	8.15	107,965	12.83	197,596	14.04	7,025	8.32
25 - 29	1,096,513	6.72	839,265	6.0	88,065	10.49	161,017	11.44	8,166	9.67
30 - 34	865,451	5.3	666,563	4.76	66,660	7.94	124,712	88.6	7,516	8.9
35 - 39	800.207	4.9	623,046	4.45	61,489	7.32	109,763	7.8	5,909	7.0
40 - 44	772,733	4.74	611,613	4.37	58,516	6.97	97.557	6.93	5,047	5.98
45 - 49	635,806	3.9	502,864	3.6	46,992	5.6	81,543	5.8	4.407	5.22
50 - 54	597,314	3.66	478,853	3.42	42,338	5.04	72,080	5.12	4.043	4.8
55 - 59	308,750	1.9	243,343	1.74	22,294	2.66	41,052	2.91	2,061	2.44
60 - 64	278,196	1.7	223,247	1.6	18,860	2.25	34,542	2.45	1,547	1.83
65+	558,848	3.42	446,256	3.19	40,582	4.83	67,817	4.82	4,193	4.97
Total	16,324,997	100.0	13,993,404	100.0	839,694	100.0	1,407,477	100.0	84,422	100.0

Source : Preliminary Results of 1976 Census of Population and Housing.

Table 2.25 : Sex Ratio by Age-Group and Place of Birth, Iran 1966

Age group	Total population	Born in Shahrestan of enumeration	Born in other Shahrestan of the same Ostan	Born in other Ostans
0 - 4	108.4	108.4	106.9	109.9
5 - 9	107.5	107.4	108.7	110.0
10 - 14	112.0	111.7	115.7	114.6
15 - 19	99.2	98.7	99.5	103.7
20 - 24	89.2	76.8	116.4	156.8
25 - 29	94.5	88.8	111.2	125.6
30 - 34	107.3	102.7	120.6	133.4
35 - 39	116.7	113.9	123.8	133.2
40 - 44	126.5	122.5	137.6	152.1
45 - 49	131.6	127.4	144.3	156.4
50 - 54	100.0	99.1	103.3	105.3
55 - 59	109.4	109.2	113.7	109.5
60 - 64	105.7	105.2	108.9	107.9
65+	113.7	113.6	113.2	115.2
Total	107.3	105.3	115.3	126.3

Source: Tables 2.23 and 2.21.

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Table 2.26 : Sex Ratio, by Age-Group, and Place of Birth
Iran : 1976

Age group	Total Population	Born in Shahrestan of enumeration	Born in other Shahrestans of the same Ostan	Born in other Ostans
0 - 4	108.34	108.28	108.08	110.27
5 - 9	107.09	107.0	110.14	107.88
10 - 14	110.78	109.83	115.3	121.78
15 - 19	101.94	96.98	111.0	144.49
20 - 24	93.28	79.69	96.49	168.98
25 - 29	92.03	116.4	96.61	120.62
30 - 34	96.62	89.08	113.1	126.63
35 - 39	102.85	95.16	126.39	131.75
40 - 44	115.82	110.67	128.68	138.65
45 - 49	118.39	115.68	128.6	127.69
50 - 54	121.96	119.74	128.93	132.27
55 - 59	128.93	127.12	135.18	135.32
60 - 64	108.91	107.81	117,03	111.86
65+	112.13	114.69	102.67	122.45
Total	106.2	103.17	112.52	131.72

Source : Tables 2.22 and 2.24

As Table 2.26 shows, in 1976 there were only two age-groups in which female-inter-Shahrestan (township) migrants out-numbered male migrants, these two age groups were 20-24 and 25-29. Table 2.26 also indicates that inter-Ostan migration in 1976 was clearly dominated by male migrants and the sex ratios ranged from 102.45 in age-group 65+ to 168.98 for the age-group 20-24.

Comparing Table 2.25 with Table 2.26 shows that there has been a marked increase in the total sex ratio for inter-Ostan migrants; the ratio increased from 126.3 in 1966 to 131.72 in 1976. However, the inter-Shahrestan migrants total sex ratio in 1976 was less than that of 1966, 115.3 and 112.52 respectively in 1966 and 1976.

The figures quoted suggest the following conclusions:

(i) The number of the people who moved between Ostans i.e. crossed the boundary of their Ostan of birth, was higher than those who moved between Shahrestans within their Ostan of birth, both in 1966 and 1976; in other words inter-Ostan migration was more popular than inter-Shahrestan migration.

(ii) Young adults aged 20-34 constitute the major group of migrants, a common phenomenon where people migrate for work, while child migrants under 10 years were relatively few.

(iii) On the whole the percentage of male migrants was higher than females; males migrate more for work than do their female counterparts.

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CHAPTER 3

URBANIZATION IN IRAN

3.1 Introduction

The process of urbanization is often taken to be a primary measure of economic development. An increase in the level of urbanization in the developing world usually involves two processes; an accelerated natural increase in urban areas due to mortality decline and the maintenance of high fertility, and a net migration gain.

The gradual socio-economic development experienced by human societies in general has stimulated many rural dwellers so that they could migrate to the cities, and this shift in population distribution has accelerated in recent decades. Thus migration from rural to urban areas, which strongly supports the urbanization process, is a worldwide phenomenon. The process of change from a rural-agricultural to an urban-industrial economy involves both spatial and occupational population redistribution. In this process the proportion of population in rural areas declines, in spite of its high fertility, whereas urban population increases rapidly due to a low mortality rate and migration (Hemmasi, M. 1974, p.87).

In Iran, as in other developing countries, the share of rural population in the total has gradually declined, while that of the urban population has tended to increase. Iran's population has become increasingly urban, particularly since 1956, but the processes and underlying factors affecting urbanization in the country have as yet received little attention.

In this section the phenomenon of urbanization in Iran, and the role of migration in the population growth in the Iranian cities

is examined. Since the declining share of rural population and rapidly increasing number of urban residents and the growth of cities is greatly influenced by internal migration, emphasis is placed on studying the relationship between urbanization and internal migration in Iran, particularly in Tehran, the national capital.

3.2 Definition of the City

The two main criteria often used for defining urban areas are, some critical level of population size or a critical level of settlement density, or a combination of these two measures (Bahrambegui, H.1978,p.7). The criterion of administrative status is also often used. Looking at the last three Iranian censuses, it seems that the first of these criteria (i.e. the critical threshold of population) has been employed as the principle for distinguishing urban settlement from the rural in Iran. In addition, there have been attempts to distinguish urban and rural areas through an occupational classification. Agricultural work is taken as typical of rural areas, providing a food surplus to support the non-agricultural urban dwellers. But in many villages only a minority of the workforce remains in agricultural employment (Tavernor, J.A., and Connell, J. 1969, p.19). At the same time a high proportion of workers in some Iranian cities are engaged in agriculture. A simple occupational classification is therefore not a useful criterion for the urban-rural classification. Thus the size of population is regarded as the sole criterion of a city in Iran.

Iran's first national population census in 1956 defined a place as a city only if it had more than 5,000 population, and on this basis, there were 186 cities of various sizes in the country. In 1966, the minimum population size of 5,000 was retained as one measure of the urban status. However, places with less than 5,000

population, but having some administrative function, such as being the centre of a Shahrestan, were also defined as cities. Accordingly, in 1966, there were 272 urban places, of which 23 had less than 5,000 population. The results of the 1976 population census show that criteria similar to those employed in 1966 have been retained to define urban places. As a result, out of the 493 places recorded as cities in 1976, 132 had under 5,000 population. It is interesting to note that 45 of these settlements did not have municipality status. In fact, there were 186, 249 and 361 urban places above the limit of 5,000 in 1956, 1966 and 1976 respectively.

In the present study all settlements with population of over 5,000 are taken as urban places, and those below this limit but defined as urban only because of their urban functions, have been left out in order to ensure a good degree of comparability.

3.3 Urbanization in Iran

According to the first national census of Iran, held in November, 1956, the country's urban population was reported to be 5,996,726. The following two decennial censuses taken in 1966 and 1976, recorded urban populations of 9,789,693 and 15,845,680, respectively. Before going into the detail and analysing available data on urbanization since the first census, an attempt is made to examine the trends of urbanization during the period 1900-1956. This is appropriate to provide a general background to the study of urbanization during the census period.

3.3.1 Urbanization in Iran, 1900 - 1956

Before 1956, the only official population records that existed were figures for a partial urban headcount, held between June 1939 and August, 1941 and the erratic statistics of the Civil Registration office, which started operations in 1928 (Bharier, J. 1971, p.23). Estimation of Iran's precensus population provided by Bharier (1968) seems to be one of the most reliable and comprehensive sources in this connection.

By comparing independent figures given for various years by historians, travellers and officials, Bharier calculated annual population totals as well as rural and urban, for the period 1900 - 1970. According to him, the total population of Iran in 1900 was 9,860,000 of which 2,070,000 was urban and 7,790,000 rural. This means that, according to these figures, Iran was an overwhelmingly rural society at the start of the twentieth century. Table 3.1 shows Iran's total, urban and rural population in decennial form for the period 1906 - 1956. The growth rate of urban, rural and total population for five 10 year periods between 1906 and 1956 has been calculated from this table and presented in Table 3.2. As is clear from Tables 3.1 and 3.2, urban population growth in Iran accelerated from an annual rate below 1.0 per cent in the first quarter of the century to 1.6 per cent during the period 1926 - 1936, to 3.5 per cent during the period 1936 - 1946 and to 4.3 between 1946 and 1956. Thus it can be seen that the annual rates of growth of urban population before 1936 were low compared with those of after 1936. However, after 1936 the divergence between the urban and the total rates of growth increased, signifying that net rural-urban migration proceeded at an increasing rate in the period to 1956.

Table 3.1 : The Population of Iran 1906-1956 - Urban and Rural Components

(in million)

Years	Total Population	Urban Population	Rural Population
1906	10.29	2.16	8.13
1916	11.05	2.32	8.73
1926	11.86	2.49	9.37
1936	13.72	2.93	10.79
1946	15.93	4.13	11.80
1956	20.38	6.32	14.06

Source : Bharier, J. (1971), Economic Development in Iran 1900-1970, Oxford University.

Table 3.2 : Annual Rates of Population Growth , Iran, 1906-1956.

Period	Total Population %	Urban Population %	Rural Population %
1906 - 1916	0.7	0.72	0.71
1916 - 1926	0.7	0.71	1.1
1926 - 1936	1.5	1.6	1.4
1936 - 1946	1.5	3.5	0.9
1946 - 1956	2.5	4.3	1.8

Source: Table 3.1

3.3.2 Growth of Cities, 1900 - 1956

Between 1900 and 1956 the number of urban places increased from 100 to 186, a net increase of 86 towns. However, of the 100 towns existing in 1900, 13 dropped out of the urban category due to an actual decline in their population (Bharier, J. 1972). Thus the 186 towns in 1956 included 87 towns which existed in 1900, plus 99 new places. The total urban population in 1956 was 5,953,563 of which 4,926,000 or 82.7 per cent was accounted for by the 87 towns existing in 1900. Of the remaining 1,027,563, 502,000 (8.43 per cent) was accounted for by the eight towns which grew up with the expansion of the Iranian oil industry, and another 71,000 owing to the growth into towns of three Tehran suburbs (Gholhak, Ray, Tajrish). The remainder - equivalent to 11.0 per cent of the net migration figures - represented the transformation of villages into towns and comprised 88 new towns with an average population, in 1956, of 9,300.

3.3.3 Internal migration and urban growth, 1900 - 1956

Investigation of Iran's pre-census population data indicates that between 1900 and 1956 internal migration had a small share in urban population growth (Clark, B.D. 1972). By taking the total urban population increase, which was 105.0 per cent between 1900 and 1956, it can be assumed that any individual town or city which showed an increase above that figure experienced sizeable net in-migration. Only 25 of the 100 towns in 1900, had net in-migration well above this figure, totalling approximately 728,000 persons, and in fact Tehran's total net in-migration was greater than all other receiving areas (Bharier, J. 1971, p.29).

3.4 Growth of Urban Population 1956 - 1976

The census of 1956 showed 31.4 per cent of the total population of Iran to be urban and by 1966 this proportion had risen to 38.0 per cent. A further dramatic increase in urbanization was shown by the 1976 census in which, of the total national population of 33,708,744, 15,854,680 or 47.0 per cent were living in urban areas and 17,854,064 (53.0 per cent) in rural areas.

As Table 3.3 indicates, between 1956 and 1966 the urban population increased by 3,840,683 (64.5 per cent) while the rural population, including nomadic population increased by only 2,993,335 (23.0 per cent), and the population of the country as a whole grew by 6,834,018 (36.0 per cent).

Urban, rural and total population of Iran increased by 6,060,434 (61.9 per cent), 1,859,588 (11.6 per cent) and 7,920,022 (30.7 per cent) respectively over a period of 10 years 1966 - 1976. Thus in the 1966 - 76 decade the rate of growth of urban population was more than five times greater than that of the rural population and considerably larger than the growth of the population of the country as a whole.

3.5 City-size Distribution in Iran

In Iran, as elsewhere, urban growth does not advance at the same rate for all levels of the urban hierarchy. The number and population of Iranian cities by size classes in the past three censuses are presented in Table 3.4. In 1956, of a total of 186 cities, 90 had 5,000 - 9,999 population, and 56 had 10,000 - 24,999 population. Thus, a large majority of Iranian cities, 146 out of the total 186, were localities with less than 25,000 inhabitants.

Table 3.3 : Iran's Total, Urban, and Rural Population Increase, 1956-66 and 1966-76

Population	1956		1966		1976		No. of Increase 1956-1966				Annual Rate of Growth	
	Number	%	Number	%	Number	%	Number	%	Number	%	56-66	66-76
Urban	5,953,563	31.4	9.794,246	39.0	15,854,680	47.0	3,840,683	64.5	6,060,434	61.9	5.1	4.9
Rural	13,001,141	68.6	15,994,476	61.0	17,854,064	53.0	2,993,335	23.0	1,859,588	11.6	2.1	1.1
Total	18,954,704	100.0	25,788,722	100.0	33,708,744	100.0	6,834.018	36.0	7,920,022	30.7	3.1	2.7

Source: 1956, 1966 and 1976 Censuses

Table 3.4 : The Number and Population of Iranian Towns by Size Classes, 1956, 1966, 1976

	Size of place	1956				1966				1976			
		No. of urban places	No. of popul-ation	% of tot-al popul-ation	Mean	No. of urban places	No. of popul-ation	% of tot-al popul-ation	Mean	No. of urban places	No. of popul-ation	% of tot-al popul-ation	Mean
1	5,000-9,999	90	628,536	10.6	6,984	118	393,909	8.2	6,728	168	1,123,718	7.3	6,894
2	10,000-24,999	56	876,915	14.7	15,659	72	1,103,673	11.4	15,329	108	1,603,459	10.5	14,847
3	25,000-49,999	22	764,716	12.8	34,760	30	1,081,309	11.1	36,044	47	1,228,340	8.0	26,135
4	50,000-99,999	9	632,953	10.6	70,328	15	1,067,906	11.0	71,194	21	1,523,748	9.9	72,559
5	100,000-249,999	6	993,757	16.7	165,626	8	1,167,381	12.1	145,923	14	2,031,397	13.3	145,100
6	250,000-499,999	2	544,704	9.2	272,352	5	1,779,901	18.3	355,980	4	1,332,356	8.7	333,089
7	500,000-999,999	-	-	-	-	-	-	-	-	3	1,940,581	12.7	646,860
8	1,000,000+	1	1,512,082	25.4	1,512,082	1	2,719,730	28.0	2,719,730	1	4,530,223	29.6	4,530,223
	TOTAL	186	5,953,663	100.0	32,010	249	9,713,809	100.0	39,011	361	15,313,822	100.0	42,420

Source: 1956, 1966 and 1976 Census.

Among the remaining 40 cities, only nine, including the largest city Tehran, had a population of more than 100,000, nine had between 50,000 and 99,999 and 22 were between 25,000 and 49,999. Tehran alone had a population of 1,512,082. Cities with less than 25,000 population, although numerous, contained 25.7 per cent of the country's urban population,whereas 51.3 per cent of the urban population was concentrated in the nine cities with a population of 100,000 and more. The capital city alone contained one-fourth of the total urban population of the country.

In 1966 the proportion of total urban population concentrated in cities with 100,000 and more population increased from 51.3 to 58.4 per cent. Cities with less than 25,000 population, however, although increasing in number from 146 to 190, experienced a decrease in their relative share of total urban population, from 25.3 to 19.6 per cent. Tehran, with a population of 2,719,809 in 1966 contained 28.0 per cent of the country's total urban population. In fact Tehran contained more inhabitants than 190 cities with less than 25,000 population taken together.

The number of cities having 5,000 - 10,000 inhabitants increased from 118 in 1966 to 168 in 1976. In 1976, although, cities having 5,000 - 25,000 inhabitants constituted a large percentage of the total number of cities 276 (76.45 per cent), they comprised a smaller percentage of the total urban population (17.9 per cent). The category of 25,000 - 50,000 experienced a modest growth. Of particular interest were those cities with a population of 100,000 and more, which constituted only 6.0 per cent of the total number of cities but contained more than 64.0 per cent of the country's total urban population. They increased in number from 9 to 14

between 1956 and 1966 and to 22 by 1976. The 1976 census showed that Tehran with 4,530,223 inhabitants, was 6.8 times bigger than Esfahan, the second city with 661,510 inhabitants, and that Tehran's population alone amounted to only half a million less than the combined population of the other 21 cities 100,000+ class.

The four-city index of urban primacy for Iran in 1956, 1966 and 1976 was 1.98, 2.4 and 2.3 respectively. While the two-city index in these years was 5.38, 7.03 and 6.8.

A study of Iran's city population reveals some other noteworthy points. In all the three censuses the cities with less than 50,000 population continued to constitute about 90.0 per cent of the total number of cities, but their share of the total urban population declined from 38.1 per cent in 1956 to 30.7 in 1966 and 25.8 in 1976. This shows that the factors causing an unbalanced urban population distribution relative to the total number of cities have been persistent - in other words the population growth of the large urban centres has continued to outpace that of small towns (Figure 3.1). Moreover in each of the censuses, the primacy of the big cities, and above all, that of Tehran, has been maintained (Figure 3.2).

3.6 Urbanization at Ostan Level

In order to assess the general progress of urbanization at the Ostan level, an attempt is made to examine differential urban population growth among the country's Ostans. Due to the changes in Ostan boundaries after 1956, direct comparison between the 1956 data and those of the two later censuses (1966 and 1976) is not possible. Therefore, in this section, first urbanization in 13

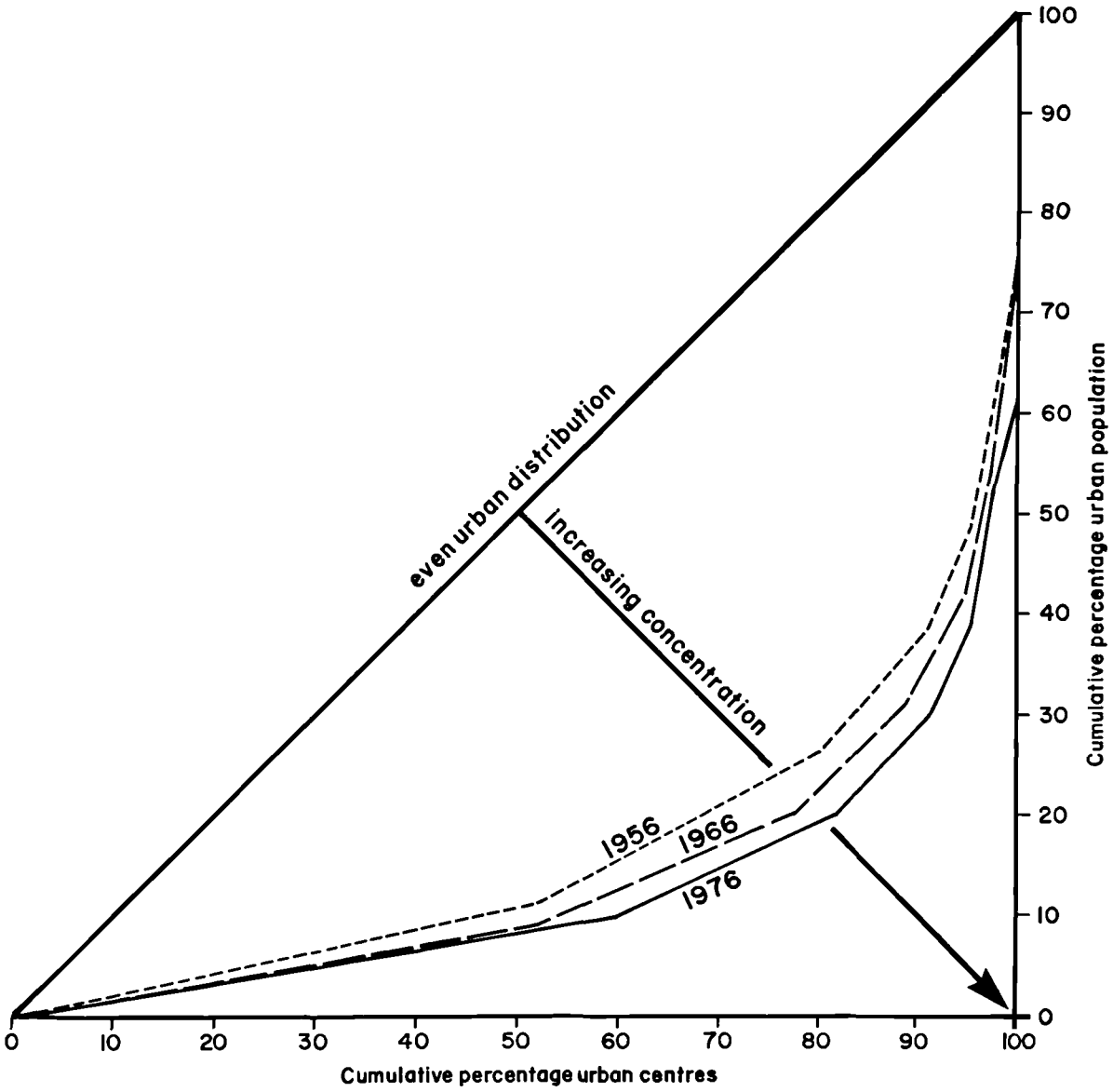

Figure 3.1 Increasing concentration of population, 1956-1976.

Source : Gudarzi-Nejad, Sh. (1977) Figure 1.

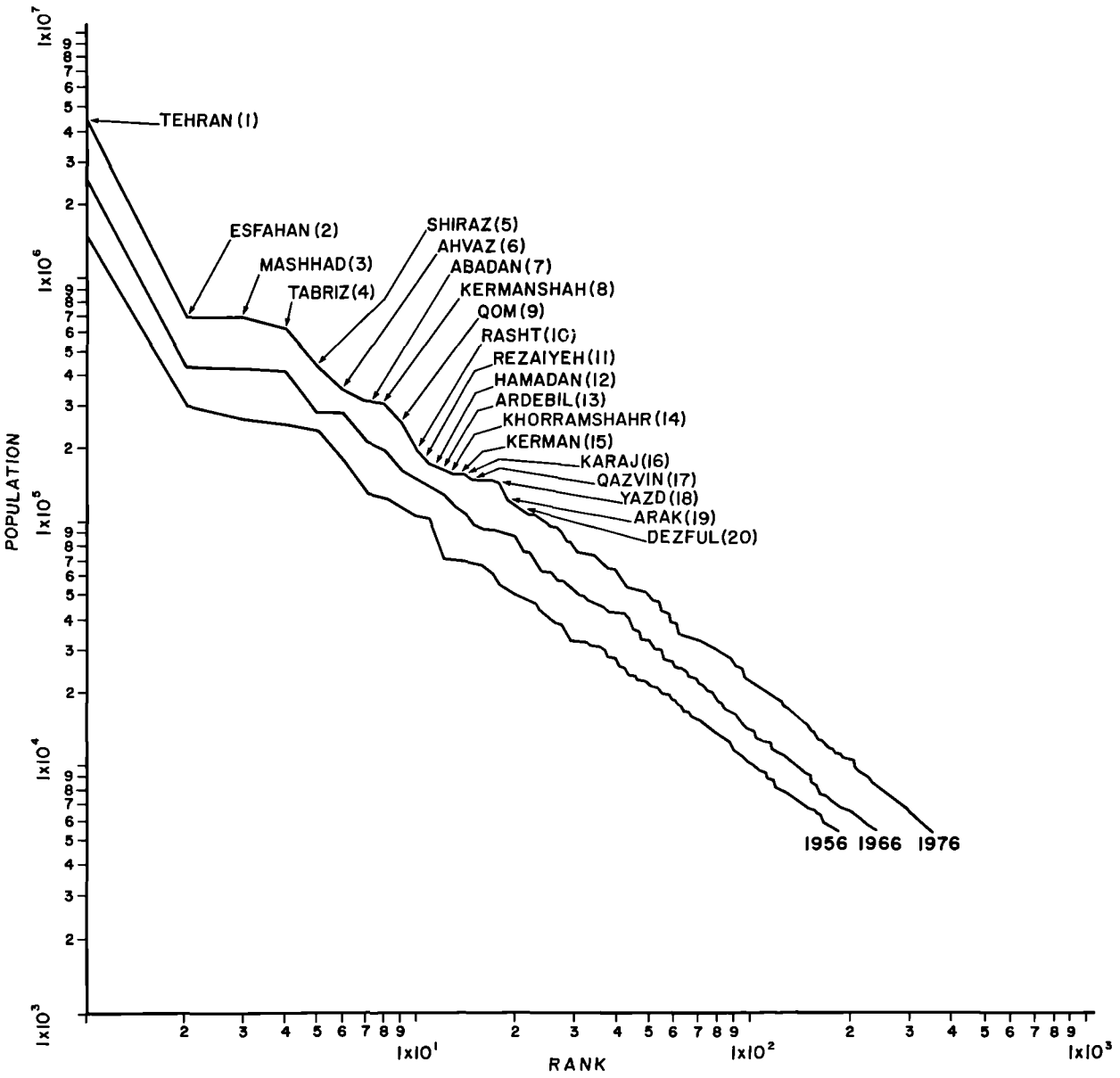

Figure 3.2 Rank-size curve of Iranian cities in 1956, 1966 and 1976.

Source : Bahrambeygui, H. (1978), Figure 1.1.

Ostans of Iran at the time of the 1956 census will be briefly examined and then attention will be focused on the intercensal changes experienced by different Ostans between 1966 and 1976. It may be noted, however, that, between 1966 and 1976, there were two boundary changes resulting in the birth of two new Ostans, Yazd, having been born out of Esfahan Ostan, and Gilan Ostan,having been bifurcated into Gilan and Zanjan. In order to preserve the degree of comparability in the present study, these boundary changes have been set aside. The newly created Ostans of Yazd, and Zanjan have therefore been treated as parts of their parent Ostans as in 1966.

3.6.1 Urbanization in Ostans, 1956

Iran is a nation of great economic, social and physical contrast. In 1956 Iran was composed of the 13 Ostans. There were considerable variations between these Ostans in terms of total population and the proportion of urban and rural inhabitants. As stated earlier, the total population of the country in 1956 was 18,954,704 of which 5,953,563, or 31.4 per cent were living in the urban areas. The number and the size of urban places differed widely from Ostan to Ostan. For instance Central Ostan with an area of 60,761 km^2 contained 20 cities, including Tehran, while Sistan-Baluchestan Ostan with 177,832 km^2 area had only two cities with a combined population of only 29,716. As Table 3.5 indicates, in 1956, more than 30.0 per cent of the urban population of Iran was living in Central Ostan (1,814,914 persons). It was followed by Khuzestan (12.7 per cent), Esfahan (9.8 per cent), and East Azarbayejan (9.2 per cent). These four Ostans together accunted for more than 62.0 per cent of the country's total urban population. The remaining 9 Ostans

Table 3.5 : Total, Urban and Rural Population of Iran by Ostan,1956

	Ostan	Total	%	Urban	%	Rural	%	Level of Urb-aniz-ation
1	Central	2,717,309	14.3	1,814,914	30.6	902,395	6.9	66.8
2	Gilan	1,629,699	8.6	321,109	5.4	1,308,590	10.1	19.7
3	Mazandaran	1,683,905	8.9	363,690	6.1	1,320,215	10.2	21.6
4	East Azar-bayejan	2,142,270	11.3	544,348	9.2	1,597,922	12.4	25.4
5	West Azar-bayejan	721,136	3.8	160,998	2.7	560,138	4.3	22.3
6	Kermansh-ahan	1,376,989	7.3	361,946	6.0	1,015,043	7.8	26.3
7	Fars	1,320,614	7.0	382,083	6.4	938,531	7.2	28.9
8	Khuzestan	2,068,503	10.9	756,092	12.7	1,312,411	10.1	36.5
9	Kerman	789,345	4.2	134,574	2.3	654,771	5.0	17.0
10	Khorasan	2,007,581	10.6	429,925	7.2	1,577,656	12.1	21.4
11	Esfahan	1,513,577	8.0	584,269	9.8	929,308	7.1	38.6
12	Kordestan	555,413	2.9	62,460	1.0	492,953	3.8	11.2
13	Sistan-Baluchestan	428,363	2.3	37,155	0.6	391,208	3.0	8.7
	Total	18,954,704	100.0	5,953,563	100.0	13,001,141	100.0	31.4

Source: First National Census of Population and Housing, 1956.

shared unequally 37.5 per cent of the total urban population of Iran. The lowest percentage of the urban population of the country in 1956 belonged to Sistan-Baluchestan Ostan (0.6 per cent of the total). It should be added that in Central Ostan more than 66.0 per cent of the population was living in urban areas, while the corresponding percentages for the remaining 12 Ostans ranged from 8.6 in Sistan-Baluchestan to 38.6 in Esfahan Ostan.

3.6.2 Distribution of urban population in Ostans, 1966 and 1976

As previously stated, in 1966 Iran's urban population was 9,794,246, which was unevenly distributed among 21 Ostans and Farmandarikols. Tables 3.6 and 3.7 show the number and the percentage of the total, urban and rural populations of Iran by Ostans in 1966 and 1976. As in 1956, there were enormous variations in size of urban population between Ostans. Whereas more than one-third of the nation's urban population was living in the Central Ostan, Kohkiluyeh Ostan accounted for less than 0.2 per cent, both in 1966 and 1976. Khuzestan Ostan, with 9.0 per cent of the total, had the second highest share of the country's urban population, followed by Esfahan (8.9 per cent), East Azarbayejan (7.7)and Khorasan (7.4). The remaining 16 Ostans together accounted for less than one-third of the country's urban population, (31.0), nine of them contained less than 2.0 per cent of the total urban population, each.

In 1976, Central Ostan again retained its earlier position by containing more than one-third of the country's urban population. Esfahan Ostan which was in the third place after Central and Khuzestan Ostans in 1966, ranked second with 9.2 per cent of Iran's total urban population. It was followed by Khuzestan (8.0 per cent), Khorasan (7.8), and East Azarbayejan (7.5 per cent). As in

Table 3.6 : Total, Urban and Rural Population of Iran by Ostan, 1966

	Ostan	Total Population	%	Urban Population	%	Rural Population	%	Level of Urbaniz-ation
1	Central	4,979,081	19.8	3,505,970	35.8	1,473,111	9.6	70.4
2	Gilan	1,752,504	7.0	386,292	3.9	1,366,212	8.9	22.0
3	Mazandaran	1,841,637	7.3	440,997	4.5	1,400,640	9.2	23.9
4	East Azarbayejan	2,596,439	10.3	755,458	7.7	1,840,981	12.0	29.1
5	West Azarbayejan	1,087,182	4.3	277,646	2.8	809,536	5.3	25.5
6	Kermanshahan	776,409	3.0	278,539	2.8	497,870	3.2	35.9
7	Khuzestan	1,578,079	6.3	883,057	9.0	695,022	4.5	55.9
8	Fars	1,439,804	5.7	580,848	5.9	858,956	5.6	40.3
9	Kerman	761,849	3.0	196,476	2.0	565,373	3.7	25.8
10	Khorasan	2,497,381	10.0	726,690	7.4	1,770,691	11.6	29.1
11	Esfahan	1,703,701	6.8	876,353	8.9	827,348	5.4	51.1
12	Sistan-Baluchestan	454,996	1.8	72,149	0.7	382,847	2.5	15.8
13	Kurdestan	619,573	2.5	102,398	1.0	517,175	3.4	16.5
14	Hamadan	889,888	3.5	230,833	2.3	659,055	4.3	25.9
15	Chaharmahal	298,448	1.2	87,552	0.9	210,896	1.4	29.3
16	Lorestan	686,307	2.7	165,634	1.7	520,673	3.4	24.1
17	Ilam	148,307	0.6	20,190	0.2	128,117	0.8	13.6
18	Ports,Islands of Persian Gulf	251,921	1.0	54,623	0.5	197,298	1.3	21.7
19	Ports,Islands of Oman Sea	346,410	1.4	53,000	0.5	293,410	1.9	15.3
20	Kohkiluyeh	161,219	0.6	15,359	0.2	145,860	0.9	9.5
21	Semnan	207,786	0.8	84,182	0.9	123,604	0.8	40.5
	TOTAL	25,078,923	100.0	9,794,246	100.0	15,284,677*	100.0	39.0

Source : Second National Census of Population and Housing, 1966.

* Nomadic population is not included

Table 3.7 : Total, Urban, Rural Population of Iran by Ostan, 1976

	Ostan	Total Population	%	Urban Population	%	Rural Population	%	Level of Urbaniz-ation
1	Central	6,962,206	20.6	5,565,307	35.1	1,396,899	7.8	79.9
2	Gilan + Zanjan	2,162,442	6.4	605,968	3.8	1,556,474	8.7	28.0
3	Mazandaran	2,387,171	7.0	776,819	4.9	1,610,352	9.0	32.5
4	East Azarbayejan	3,197,685	9.5	1,188,292	7.5	2,009393	11.2	37.1
5	West Azarbayejan	1,407,604	4.2	446,714	2.8	960,890	5.4	31.7
6	Kermanshahan	1,030,714	3.0	441,885	2.8	588,829	3.3	42.8
7	Khuzestan	2,187,118	6.5	1,275,109	8.0	912,009	5.1	58.3
8	Fars	2,035,582	6.0	872,768	5.5	1,162,814	6.5	42.8
9	Kerman	1,091,148	3.2	350,806	2.2	740,342	4.1	32.1
10	Khorasan	3,264,398	9.7	1,245,258	7.8	2,019,140	11.3	38.1
11	Esfahan + Yazd	2,326,814	6.9	1,460,137	9.2	866,677	4.8	62.7
12	Sistan-Baluchestan	664,292	2.0	162,854	1.0	501,438	2.8	24.5
13	Kordestan	782,440	2.3	190,375	1.2	592,065	3.3	24.3
14	Hamadan	1,088,024	3.2	325,176	2.0	762,848	4.3	30.0
15	Chaharmahal	394,357	1.2	140,272	0.9	254,085	1.4	35.5
16	Lorestan	933,939	2.8	294,618	1.8	639,321	3.6	31.5
17	Ilam	246,024	0.7	48,595	0.3	197,429	1.1	19.7
18	Kohkiluyeh	244,370	0.7	30,867	0.2	213,503	1.2	12.6
19	Bushehr	347,863	1.0	119,144	0.7	228,719	1.3	34.2
20	Hormozgan	462,440	1.4	123,462	0.8	338,978	1.9	26.7
21	Semnan	492,113	1.4	190,254	1.2	301,859	1.7	38.6
	TOTAL	33,708,744	100.0	15,854,680	100.0	17,854,064	100.0	47.0

Source : Third National Census of Population and Housing, 1976.

1966, the remaining 16 Ostans accounted for less than one-third of the country's urban population in 1976, 10 out of these had less than 2.0 per cent of the nation's urban population each, with Kohkiluyeh (0.2 per cent) having the lowest share.

The pattern of the distribution of urban population shows that in all the three censuses, Central Ostan had the highest share, a fact that reflects the considerable weight of the national capital, Teheran.

In each of the three censuses more than two-thirds of the country's urban population was concentrated in only five Ostans, and the remaining 16 Ostans accounted for less than one-third.

Factors causing this pattern of urban population distribution are many and differ from Ostan to Ostan. For instance Khuzestan is the country's main oil region and its urban population growth was mainly due to this fact. Central Ostan owes its high percentage of urban population to the capital city of Tehran which with 4,530,223 inhabitants contained more than 28.0 per cent of the country's urban population. Thus, it is obvious that Central Ostan has played a considerable part in the rate and level of urbanization in the country in all the three censuses,so much so that if, for example, in 1976 one withdraws this Ostan from the total, the country's urbanization level falls from 47.0 to 30.4.

Historical functions, together with recent industrial development, have contributed to the concentration of the urban population in Esfahan Ostan. Although Khorasan with 3,264,398 and East Azarbayejan with 3,197,686 inhabitants, in 1976, were the next most highly populated Ostans after Central Ostan, they accounted for

only 7.8 and 7.5 per cent of the country's urban population respectively. Further, the proportion of their urban population was smaller in comparison with the more urbanized Ostans such as Esfahan and Khuzestan.

A large number of Ostans which constitute a small proportion of the total, as well as the urban population of the country are located in the eastern and southern part of Iran, where the severely dry, hot climate, together with a scarcity of water and poor quality of soil imposes natural limitations on extensive habitation, (Sistan-Baluchestan, Bushehr, Hormozgan). This part of the country, including the western mountainous areas wherein lie Kohkiluyeh, Ilam, Lorestan, and Chahrmahal Ostans, represents the lowest percentage of urban population in Iran.

Between the two groups of Ostans, i.e. (1) the highly populated and urbanized and (2) the less populated and with a large proportion of rural population, there is a third group of well populated and relatively moderately urbanized Ostans, such as Fars, Mazandaran, Kermanchahan, Gilan and West Azarbayejan.

3.6.3 Urban Population Change at Ostan Level 1966 - 1976

In order to acquire an accurate picture of urbanization at Ostan level in recent years, the changes in urban population of the country's Ostans during the period 1966 - 1976 decade are examined in this section. For this purpose, the number and the percentage of urban populations of 21 Ostans in 1966 and 1976 are presented in Table 3.8. According to this Table the urban population of Iran increased by 6.060,434 or 61.9 per cent during 1966 to 1976, at an average increase rate of 4.9 per cent per annum.

Table 3.8 : Urban Population Changes in Iran, by Ostan 1966 - 1976

	Ostan	Urban Population 1966	%	Urban Population 1976	%	No.of increase 1966 - 1976	% of increase 66 - 76	Annual growth rate
1	Central	3,505,970	35.8	5,565,307	35.1	2,059,337	58.7	4.7
2	Gilan + Zanjan	386,292	3.9	605,968	3.8	219,676	56.8	4.6
3	Mazandaran	440,997	4.5	776,819	4.9	335,822	76.1	5.8
4	East Azarbayejan	755,458	7.7	1,188,292	7.5	432,834	57.3	4.6
5	West Azarbayejan	277,646	2.8	446,714	2.8	169,068	60.9	4.9
6	Kermanshahan	278,539	2.8	441,885	2.8	163,346	58.6	4.7
7	Khuzestan	883,057	9.0	1,275,109	8.0	392,052	44.4	3.7
8	Fars	580,848	5.9	872,768	5.5	291,920	50.2	4.1
9	Kerman	196,476	2.0	350,806	2.2	154,330	78.5	6.0
10	Khorasan	726,690	7.4	1,245,258	7.8	518,568	71.4	5.5
11	Esfahan + Yazd	876,353	8.9	1,460,137	9.2	583,784	66.6	5.2
12	Sistan-Baluchestan	72,149	0.7	162,854	1.0	90,705	125.7	8.5
13	Kordestan	102,398	1.0	190,375	1.2	87,977	85.9	6.4
14	Hamadan	230,833	2.3	325,176	2.0	94,343	40.9	3.5
15	Chaharmahal	87,552	0.9	140,272	0.9	52,720	60.2	4.8
16	Lorestan	165,634	1.7	294,618	1.8	128,984	77.8	5.9
17	Ham	20,190	0.2	48,595	0.3	28,405	140.7	9.2
18	Kohkiluyeh	15,359	0.2	30,867	0.2	15,508	100.9	7.2
19	Bushehr	54,623	0.5	119,144	0.7	64,521	118.1	8.1
20	Hormozgan	53,000	0.5	123,462	0.8	70,462	132.9	8.8
21	Semnan	84,182	0.9	190,254	1.2	106,072	126.0	8.5
	TOTAL	9,794,246	100.0	15,854,680	100.0	6,060,434	61.9	4.9

Source: Second and Third National Census of Population and Housing 1966, 1976.

During the same decade Iran's total population increased by 30.5 per cent. Since the rate of Iran's urban population increase was higher than that of its total population, the 21 Ostans may be divided into two classes. Those in which the rate of urban population increase was higher than the nation's urban population increase, i.e. 61.9 per cent, and those whose urban population grew at a slower rate than the country's urban population, but faster than the nation's total population (34.4 per cent). 12 out of the total 21 Ostans which experienced considerable increase in their urban population were placed in the first class. Among these 12 Ostans the highest rate of increase was experienced by the Ilam Ostan (140.7 per cent) Hormozgan (132.9), Semnan (126.0), Sistan-Baluchestan (125.7) and Bushehr (118.1). All these Ostans doubled their urban population over the 10 year period preceding 1976. Among the remaining 7 Ostans the rate of increase varied from 66.6 per cent in Esfahan to 100.9 in Kohkiluyeh.

The second category comprised 9 Ostans in which the urban population increase was higher than the nation's total population growth rate, but lower than the country's urban population growth rate. It is interesting to note that some of the highly populated and urbanized Ostans, including the Central Ostan were placed in this category. The lowest rates of urban population increase were observed in Hamadan (26.4 per cent) and Khuzestan (40.9). Among the remaining 8 Ostans, including the Central Ostan, the rates ranged between 44.4 per cent in Khuzestan and 60.9 in West Azarbayejan. Urban population growth rate in the Central Ostan, which contained more than one-third of the country's urban population was 58.7 per cent.

Table 3.8 also lists the annual growth rates of the urban populations for Ostans between 1966 and 1976. The annual rate of

urban population growth varied from 3.5 in Hamadan Ostan to 9.2 in Ilam. It should be added here that the annual growth rate of the total population of Iran was 2.7 per cent, thus, the rate of urban population growth of all the 21 Ostans was higher than that of the total population of the country as a whole.

Some noteworthy points can be made from the above analysis. Almost all the highly populated and urbanized Ostans showed growth rates lower than the Nation's urban population growth. However, most of the less populated and less urbanized Ostans increased their populations rapidly during 1966 - 76, so much so that five such Ostans doubled their urban population in the same period.

The reason for this seems to be partly the local migration to Ostans' capitals and partly the expansion of some rural settlements. It is also bound up with the fact that areas with large urban populations will inevitably tend to have a lower rate of urban growth than areas with small urban populations. Moreover, industrial development in some Ostans such as Esfahan, Kerman, Hormozgan, Bushehr, has considerably changed the demographic features of these areas.

Table 3.9 illustrates the distinction between urban and rural population growth in Iran and its Ostans. This Table presents the number and percentage of Iran's rural population in 1966 and 1976 by Ostan.. Annual growth rate of rural population of the 21 Ostans between 1966 and 1976 is also shown by this Table. Comparing Table 3.8 with Table 3.9 reveals considerable differences in urban and rural population growth rates at the Ostan level. According to Table 3.9 Iran's rural population increased by only 16.8 per cent between 1966 and 1976, which was almost one-fourth of the urban population growth rate. As Table3.9 shows, 16 Ostans had a growth

Table 3.9 : Rural Population Changes in Iran by Ostan, 1966 - 1976

	Ostan	Rural Population 1966	%	Rural Population 1976	%	No.of increase 1966 - 1976	% of increase 66 - 76	Annual growth rate
1	Central	1,473,111	9.6	1,396,899	7.8	- 76,212	- 5.2	- 5.3
2	Gilan + Zanjan	1,366,212	8.9	1,556,474	8.7	190,262	13.9	1.3
3	Mazandaran	1,400,640	9.2	1,610,352	9.0	209,712	14.9	1.4
4	East Azarbayejan	1,840,981	12.0	2,009,393	11.2	168,412	9.1	0.9
5	West Azarbayejan	809,536	5.3	960,890	5.4	151,354	18.7	1.7
6	Kermanshahan	497,870	3.2	588,829	3.3	90,959	18.2	1.7
7	Khuzestan	695,022	4.5	912,009	5.1	216,987	31.2	2.7
8	Fars	858,956	5.6	1,162,814	6.4	303,858	35.4	3.0
9	Kerman	565,375	3.7	740,342	4.1	174,967	30.9	2.7
10	Khorasan	1,770,691	11.6	2,019,140	11.3	248,449	14.0	1.3
11	Esfahan + Yazd	827,348	5.4	866,677	4.8	39,329	4.7	0.5
12	Sistan-Baluchestan	382,847	2.5	501,438	2.8	118,591	30.9	2.7
13	Kordestan	517,175	3.4	592,065	3.3	74,890	14.5	1.4
14	Hamadan	659,055	4.3	762,848	4.3	103,793	15.7	1.5
15	Chaharmahal	210,896	1.4	254,085	1.4	43,189	20.5	1.9
16	Lorestan	520,673	3.4	639,321	3.6	118,648	22.8	2.0
17	Ilam	128,117	0.8	197,429	1.1	69,312	54.1	4.4
18	Kohkiluyeh	145,860	1.3	213,503	1.2	67,643	46.3	3.9
19	Bushehr	197,298	1.9	228,719	1.3	31,421	15.9	1.5
20	Hormozgan	293,410	0.9	338,978	1.9	45,568	15.5	1.4
21	Semnan	123,604	0.8	301,859	1.7	178,255	178.2	9.3
	TOTAL	15,284,677 *	100.0	17,854,064	100.0	2,569,388	16.8	1.6

Source : Second and Third National Censuses of Population and Housing, 1966, 1976.
* Nomadic population is not included

rate below the national average of 2.7 per cent. It is interesting to note that the rural population of Central Ostan actually decreased by 76,212 (5.2 per cent) in the 10 year period between 1966 and 1976. On the other hand, among five Ostans which experienced an increase rate in their rural population higher than that of the country as a whole, Semnan ranked first with 9.3 per cent. It was followed by Ilam (4.4 per cent) Kohkiluyeh (3.9) and Fars (3.0).

A comparative and analytical study of the urban and rural population of Iran, particularly at the Ostan level, reveals that the backwardness of the countryside and the fragmentation of the rural population into small communities is an essential product of an exceptionally harsh environment (Graham, R. 1979, p.28). With the exception of the Caspian coast and a few other small areas, rainfall is scarce, water hard to obtain and soil poor. Thus there are very few places with sufficient resources to support large communities, usually restricting villages to the groupings of 50 inhabitants, and encouraging nomadism.

In short, due to a rapid urban development and a high rate of urban population growth on the one hand, and the poverty and backwardness of the rural areas, notwithstanding the modernization of Iran, on the other, a dual economy has come into being. This is characterized by a dynamic urban sector and a stagnating rural one.

3.7 Urbanization and its Relationship to Internal Migration

Migration of people from rural to urban areas, which strongly supports the urbanization process, is a worldwide phenomenon. Rural - Urban migration is one of the most powerful and consistent forces in Iran. The relationship between differential rates of

urban growth and internal migration flows is obviously more complex than a simple correspondence between the rate of growth and the percentage of population made up by migrants. However, modern urban growth in Iran is obviously too considerable to be accounted for by natural increase alone, migration must also have played a decisive role. Thus it is clear that a major proportion of the urban population growth has been the result of internal migration.

As previously stated, only 25 of the 100 towns existing in 1900 experienced a significant amount of net in-migration before 1956. This means that the net movement towards the towns tended to be of a fairly selective nature. Moreover, total net in-migration into the urban areas of 728,000 over the fifty six years was actually less than the total net in-migration into Teheran alone.

By comparing the natural growth population total in 1956, with actual population of towns which lost their population between 1900 and 1956 a figure of 1,074,000 is obtained for the total net loss of population from these towns. Similarly, a total of 1,759,000 is obtained for the 25 towns which gained population. The difference between these two figures (685,000) must equal the total net rural-urban migration in the period, which was 728,000. Bharier (1972) has shown that of the total of 1,759,000 for the 25 towns which gained population, about 1,060,000 (60.0 per cent) was taken by in-migrants into Tehran, and about 92,000 (5.0 per cent) by in-migrants in Mashhad. These towns thus accounted for 65.0 per cent of the total net in-migration into urban places. Thirty one per cent of the net out-migration from urban places which lost population was accounted for by losses from four cities; Tabriz (10.0 per cent), Khoy (8.0 per cent), Yazd (8.0 per cent)

and Kerman (5.0 per cent). None of the remaining 72 cities accounted for more than 5.0 per cent of losses from declining towns.

3.7.1 The role of migration in the growth of population in the Iranian cities

The overall urban growth rate of 5.1 per cent for the 1956-1966 intercensal period attained an even faster trend, reaching 6.0 per cent per annum over the 1966-1976 decade. The rapid expansion in urban population seems to have started only since the second world war and the urban population has increased by more than three-fold since 1956. Rural migration, which presently accounts for almost half the growth of Iranian cities, began to develop on any scale only at this time.

In the absence of data on birth and death rates it has been assumed for the purpose of this calculation that the differential growth rate of cities is due largely to migration from rural areas and small towns. Based on this assumption, an attempt is made to calculate the annual rate of net migration for the 42 largest Iranian cities, in order to show the significant changes in their population due to migration during the 1956-66 and 1966-76 decades.

Table 3.10 shows the estimated net decennial migration and annual rate of migration for these 42 cities during the 1956-66 decade. For example, had the population of Esfahan city grown only due to natural increase, (2.8 per cent per annum), it would have gained only 80,997 persons. But, in fact its population increased by 169,337. The difference (88,340) between the actual increase and the natural increase, can be attributed to net migration. As Table 3.10 shows, nine out of the 42 cities showed a rate lower

Table 3.10 : The Contribution of Net Migration to Population Change in the 42 Largest Cities of Iran, 1956-1966

	Cities	Population 1956 1	Population 1966 2	Actual Rate of Growth 3	Expected 1966 Population 4	Estimated Net Decennial migration 5	Geometric mean between 1956 & 66 population 6	Estimated Annual Rate of net-migration (000) 7
1	Tehran	1,560,934	2,980,041	6.7	2,057,385	922,656	2,156,000	+ 42
2	Esfahan	254,708	424,045	5.2	335,705	88,340	329,000	+ 27
3	Mashhad	241,989	409,606	5.4	318,942	90,664	315,000	+ 29
4	Tabriz	289,996	403,413	3.4	-	-	-	-
5	Shiraz	170,659	269,865	4.7	224,929	44,936	215,000	+ 21
6	Ahvaz	120,098	206,375	5.5	158,289	48,086	157,000	+ 31
7	Abadan	226,038	272,962	1.9	292,977	-25,015	248,000	- 10
8	Kermanshah	125,439	187,930	4.1	165,329	22,601	153,000	+ 15
9	Qum	96,499	134,292	3.4	-	-	-	-
10	Rasht	109,491	143,557	2.8	-	-	-	-
11	Urumiyeh	69,605	110,749	5.1	89,103	21,646	86,500	+ 25
12	Hamadan	99,909	124,167	2.2	131,680	- 7,513	111,400	- 7
13	Ardabil	65,742	83,596	2.4	87,503	- 3,907	74,100	- 5
14	Khorramshahr	43,850	88,536	7.3	58,364	30,172	62,310	+ 48
15	Kerman	62,175	85,404	3.2	-	-	-	-
16	Karaj	14,526	44,243	11.8	19,334	24,909	25,350	+ 98
17	Qazvin	66,420	88,106	2.8	-	-	-	-
18	Yazd	63,501	93,241	3.9	84,521	8,720	76,950	+ 11
19	Arak	58,998	71,925	2.0	78,526	- 6,601	65,100	- 10
20	Dezful	52,121	84,499	5.0	69,373	15,126	66,360	+ 23
21	Khorramabad	38,676	59,578	4.4	51,478	8,100	48,010	+ 17
22	Borujerd	49,186	71,486	3.8	65,467	6,019	59,300	+ 10
23	Zanjan	47,159	58,714	2.2	62,768	- 4,054	52,620	- 8
24	Sanandaj	40,641	54,578	3.0	-	-	-	-
25	Zahedan	17,495	39,732	8.6	23,285	-16,447	26,370	+ 62
26	Bandar-e-Abbas	17,710	34,627	6.9	23,572	11,055	24,700	+ 45
27	Gorgan	28,380	51,181	6.1	37,774	13,407	38,110	+ 35
28	Kashan	45,955	58,468	2.4	61,166	- 2,698	51,840	- 5
29	Masjed Soleyman	44,651	64,488	3.7	59,430	5,058	53,660	+ 9
30	Najafabad	30,422	43,384	3.6	40,491	2,893	36,330	+ 8
31	Sari	26,278	44,547	5.4	34,981	18,269	34,220	+ 53
32	Khoy	34,491	47,648	3.3	-	-	-	-
33	Sabzevar	30,545	42,415	3.3	-	-	-	-
34	Amol	22,251	40,076	6.1	29,616	10,460	29.900	+ 35
35	Babol	36,194	49,973	3.3	-	-	-	-
36	Shahi	23,055	38,898	5.4	30,686	8,212	29,950	+ 27
37	Maragheh	36,551	54,106	4.0	48,649	5,457	44,470	+ 12
38	Gonbad-e-Kavous	7,557	40,667	18.0	10,056	30,611	17,530	+175
39	Neyshabour	25,820	33,482	2.6	-	-	-	-
40	Bandar-e-Bushehr	18,412	23,547	2.5	-	-	-	-
41	Bandar-e-Anzali	31,349	41,785	2.9	-	-	-	-
42	Kazerun	30,641	39,758	2.6	-	-	-	-

Source: Cols. 1,2 First and Second National Census of Population and Housing, 1956, 1966.
Cols. 3,4,5,6,7 calculated by author.

than the national average (2.8), and therefore can be assumed to have experienced a net out-migration. The growth rate of one city, Rasht, was 2.8, equal to the national annual growth rate. The remaining 32 cities showed a higher rate than that of the country as a whole. Among the 32 cities which experienced net in-migration, Ghonbad-e-Kavous had the highest annual rate of net in-migration (175.0 per thousand), followed by Karaj (98.0) and Zahedan (62.0). Among the remaining 29 cities the annual rate of net in-migration varied between 8.0 per thousand in Najafabad and 53.0 in Sari.

Although owing to the effect of its sizable population the annual rate of net in-migration was not markedly high for Tehran, however it alone accounted for more than 66.5 per cent of all the net migrants attracted by the 32 largest cities. Table 3.11 presents corresponding data for the 1966-1976 decade. A comparison between Tables 3.10 and 3.11 indicates remarkable changes in the rates of population growth, number of migrants, as well as the annual rate of net migration of these 42 cities, between 1956-66 and 1966-76. As in the 1956-66 decade, internal migration, particularly rural-urban migration played a great role in the growth of Iranian cities between 1966 and 1976. As Table 3.11 indicates only 4 out of the 42 cities showed an annual growth rate below the national average of 2.7 per cent. All the remaining 38 cities had a higher rate. Karaj City with 12.0 per cent showed the highest annual rate of increase, and also had the highest annual net in-migration rate, 102.3 per thousand, followed by Bandar-e-Abbas (77.0) and Bandar-e-Bushehr (76.5). As Bahrambeygui, H.(1978, p.105) has mentioned, the geographical location of Karaj City, on one of

Table 3.11 : The Contribution of Net Migration to Population Change in the 42 Largest Cities of Iran, 1966-1976

Cities	Population 1966 1	Population 1976 2	Actual Rate of Growth 3	Expected 1976 Population 4	Estimated Net Decennial migration 5	Geometric mean between 1966 & 76 population 6	Estimated Annual Rate of net-migration (000) 7
1 Tehran	2,980,041	4,530,223	4.3	3,889,794	640,429	3,660,428	+ 17.5
2 Esfahan	424,045	661,510	4.5	553,498	108,012	533,745	+ 20.2
3 Mashhad	409,606	667,770	5.0	534,664	133,106	523,943	+ 25.4
4 Tabriz	403,413	597,976	4.0	526,568	71,408	491,399	+ 14.5
5 Shiraz	269,865	425,813	4.7	352,250	73,563	335,220	+ 22.0
6 Ahvaz	206,375	334,399	4.9	269,377	65,022	260,573	+ 25.0
7 Abadan	272,962	294,068	0.7	356,292	-62,224	284,286	- 22.0
8 Kermanshah	187,930	290,600	4.4	245,301	45,299	233,798	+ 19.4
9 Qum	134,292	247,219	6.3	175,289	71,930	182,064	+ 39.5
10 Rashat	143,557	188,957	2.8	-	-	-	-
11 Urumiyeh	110,749	164,419	4.0	144,559	19,860	134,765	+ 14.7
12 Hamadan	124,167	165,785	2.9	162,073	3,712	139,107	+ 2.7
13 Ardabil	83,596	147,865	5.8	109,116	38,749	111,006	+ 35.0
14 Khorramshahr	88,536	140,490	4.7	115,564	24,926	113,969	+ 22.0
15 Kerman	85,404	140,761	5.1	111,476	29,285	109,466	+ 26.7
16 Karaj	44,243	137,926	12.0	57,750	80,176	78,356	+102.3
17 Qazvin	88,106	139,258	4.7	115,003	24,255	110,476	+ 22.0
18 Yazd	93,241	135,925	3.8	121,706	14,219	112,603	+ 12.6
19 Arak	71,925	116,832	5.0	93,882	22,950	90,751	+ 25.3
20 Dezful	84,499	121,251	3.7	111,374	9,877	101,331	+ 9.7
21 Khorramabad	59,578	104,912	5.8	77,766	27,146	79,065	+ 34.3
22 Borujerd	71,486	101,345	3.5	93,309	8,036	84,592	+ 9.5
23 Zanjan	58,714	100,351	5.5	76,638	23,713	76,612	+ 31.0
24 Sanandaj	54,578	95,872	5.8	75,155	20,717	74,282	+ 28.0
25 Zahedan	39,732	93,740	8.9	51,861	41,879	60,665	+ 69.0
26 Bandar-e-Abbas	34,627	87,981	9.8	45,198	42,783	55,546	+ 77.0
27 Gorgan	51,181	88,033	5.6	66,806	21,227	67,242	+ 31.5
28 Kashan	58,468	84,863	3.8	76,317	8,546	70,307	+ 12.1
29 Masjed Soleyman	64,488	77,098	1.8	84,175	- 7,077	70,540	- 10.0
30 Najafabad	43,384	75,276	5.6	56,628	18,648	57,510	+ 32.4
31 Sari	44,547	70,753	4.7	58,146	12,607	56,213	+ 22.4
32 Khoy	47,648	70,357	4.0	62,193	8,164	57,768	+ 14.1
33 Sabzevar	42,415	69,562	5.0	55,363	14,199	54,166	+ 26.2
34 Amol	40,076	68,963	5.6	52,310	16,653	52,502	+ 31.7
35 Babol	49,973	68,963	3.3	65,229	3,734	58,781	+ 6.3
36 Shahi	38,898	63,377	5.0	50,773	12,604	49,616	+ 25.4
37 Maragheh	54,106	65,172	1.9	70,623	- 5,451	57,364	- 9.5
38 Gonbad-e-Kavous	40,667	60,721	4.0	53,082	7,639	49,342	+ 15.5
39 Neyshabour	33,482	59,562	5.9	43,703	15,859	44,483	+ 35.6
40 Bandar-e-Bushehr	23,547	58,956	9.6	30,735	28,221	36,853	+ 76.5
41 Bandar-e-Anzali	41,785	55,481	2.8	-	-	-	-
42 Kazerun	39,758	51,527	2.6	-	-	-	-

Source: Cols. 1 and 2 Second and Third National Censuses of Population and Housing, 1966,1976.
Cols. 3,4,5,6,7 calculated by author.

the busiest routes of Iran linking the Northern, Northwestern and Western parts of the Country to Tehran, and the nearness of this city to the capital, can be considered as the main factors in attracting a large number of migrants, particularly step-wise migrants. Tehran is the original destination of these step-wise migrants, but because of the higher cost of living and shortage of accommodation in the capital, they prefer to stay in Karaj, where the overall cost of living is relatively lower than Tehran.

It should be mentioned here that step-wise migration may be defined as a process whereby the migrant moves to the nearest larger place and, as a result of that move, changes his place utility requirements (for example by obtaining further education or job skills) which then leads to a further move (White and Woods, 1980,36). Step-wise migration generally implies movement through a series of places, for example from a village up the urban hierarchy.

Generally, as Harvey and Riddle (1974, 53) have pointed out, the nature of step-wise migration, which imples a migration by stages or steps from a rural environment via lower-order centres to higher-order places, is an interesting concept but one that has been difficult to test empirically because of the paucity of data describing individual moves.

In Iran, various types of step wise migration would appear to occur, at a variety of levels. It is probable that many of the migrants from different parts of Iran use a half-way house on their way to the Central Ostan and Tehran. For example, Kerman Ostan seems to be half-way-house or first quasi-permanent destination for migrants from the Persian Gulf, Southern Iran, and eastern Iran especially Baluchestan to the much more economically and socially developed Ostans of Esfahan and the Central Ostan (Hill, 1973, 117). According to Hill (1973, 156) one form of step-wise migration occurs interprovincially when people from West Azarbayejan move to Tabriz (capital of East Azarbayejan Ostan) before

going to Tehran. A second form is represented by the intra-provincial migrant from Ardabil, who goes first to Tabriz before migrating inter-provincially to Tehran. A third form is the rural interprovincial migrant who moves into rural villages and then later towns such as Ardabil. On all levels a form of "replacement" is also occurring whereby migrants are constantly moving to more urban areas and are being replaced by those from the more rurally isolated areas.

Discussing various types of step-wise migration Jones (1981,248) has indicated that there is an intergenerational form of "step" migration in that parents may move from rural areas to small cities, and their children may move on later to a large city.

Abadan, which was one of the most important industrial centres due to the oil industry, and experienced a remarkable population increase due to net in-migration prior to 1956, not only lost its attractive power, like other cities surrounding the oil field in the Khuzestan Ostan, but also experienced, surprisingly, a considerable net out-migration both during the 1956-66 and 1966-76 decades, presumably due to the cut-back in employment by the expatriate oil concessionaires.

Investigation into Tehran's population growth reveals that migration played a major role in its growth. It was particularly true during the 1956-1966 decade, when 58.2 per cent of its growth was due to a tremendous net in-migration from all over the country. During the 1966-1976 decade only 35.7 per cent of Tehran's population growth was attributed to net in-migration. In the same period the annual rate of net in-migration for Tehran was 17.5 per thousand compared with 42.0 per thousand during the previous decade. This shows a marked decrease in the number of Tehran's net in-migrants. Comparing Tehran's growth rate with relatively higher growth rates of the other cities (Table 3.11), shows that Tehran can no longer be considered as the only city attracting the major portion of the country's internal migrants.

Ostan capitals like Esfahan, with its enormous steel complex, petrochemicals and refining industry; Ahvaz, the centre of the oil industry and an important future steel producing area; Shiraz, the home of an expanding electronics industry, Tabriz, the centre of Iran's heavy engineering industry and many other cities showed considerable increase in their population due to net in-migration in recent years.

3.8 Position of Tehran in Iran's Urbanization Process

The population of Tehran has been subject to a very rapid increase during recent decades; a twenty two fold increase in fifty five years, from an estimated 200,000 in 1921 to 4,530,223 in 1976. Such rapid growth is mainly due to the acceleration of net in-migration from the rest of the country, natural increase and, to some extent, the engulfing and annexation of rural and sub-urban areas to the city (Bahrambeygui, H. 1977, p.50).

In 1900, Tehran was just beginning to distinguish itself from the other major cities of the time, like Esfahan, Tabriz, Shiraz by being the first to possess some of the attributes of the industrial world. Tehran is unique in the history of capital cities of Iran because its privileged position brought large industrial, cultural and commercial investment to the city (Firoozi, F, 1977).

During the First World War the population of the country increased only slightly. A relatively slow growth of population in this period can be seen from another enumeration taken in 1921. According to this, the inhabitants of Tehran were reported to number 196,255 or 1.7 per cent of the total population of the country. After 1925, however, a rapid increase of population occurred as a

result of the reconstruction of the city and the opening of factories. In addition, new ministries created thousands of jobs which, in turn, led to the influx of a large number of migrants from the Ostans. This flow was facilitated by the construction of a number of inter-urban highways such as that from Mazandaran, the development of bus services, and later, the foundation of the Trans-Iranian railway.

During the Second World War, Tehran received further migrants as a result of food shortage, a series of continous cold winters and agricultural difficulties in the Ostans. This was followed by a period of political disturbances in the north western Ostans of Azarbayejan and Kurdestan. By the end of the 1940's, however, more stable conditions prevailed. Oil production increased, which was reflected, for example, in the establishment of the Plan Organization of Iran, which proved instrumental in the initiation of major improvements. The creation of new jobs and business opportunities allowed earlier migrants to bring in their relatives and at the same time encouraged more migrants to move into Tehran. Consequently, the population of the city doubled between 1940 and 1950 reaching one million in the latter year (Bahrambeygui, H. 1977, p.54).

In 1956, out of 2,080,000 migrants in the whole country, more than 755,000 (or 36.3 per cent) were attracted to Tehran, which constituted 50.0 per cent of the city's 1956 population. The trend continued and in the 1966 census out of Iran's 3.3 million migrants, about 40.5 per cent were absorbed by Tehran. However, a problem encountered herewas that those who had been counted as migrants in 1956 were considered as migrants again in 1966 and 1976. This makes a comparative study of the in-migration almost impossible. However, according to the Tables 3.10 and 3.11 net in-migrants of Tehran numbered 992, 656, during the period 1956-66 and 640,429 during the

1966-76 decade, which on average were more than 92,265 and 64,043 net in-migrants per annum and accounted for 58.2 and 35.7 per cent of the annual growth of Tehran's population, respectively.

Tehran, being the national capital, is now the undisputed focus of political, administrative, economic, social and cultural life. The industrial capacity of Tehran accounts for 51.0 per cent of all manufactured goods produced. Out of sheer convenience the main non-oil industries, particularly the automotive sector, preferred to establish themselves around Tehran. Thus the city's industrial work-force represents 22.0 per cent of the country's total. One-third of all government employees are based here and over 60.0 per cent of the country's student population is being educated in Tehran (Graham, R. 1979, p.25). Besides, roughly 50.0 per cent of all doctors live in Tehran, which means half the country's doctors serve 11.0 per cent of its population. It is the major production centre of the country. The roads, railroads, telephone, telegraph and other such facilities are designed in a way so as to make various parts of the country accessible to Tehran (Firoozi, F. 1977). Its economy dominates the national economy to the extent that it has reduced most other areas to supply centres. The result has been an unbalanced economy, an unhealthy consolidation of business and unrestrained monopoly practices which endanger the nation's economic health and impede its further growth. Finally, the rise of Tehran to a situation of enormous primacy and dominance, and the great general increase in urbanization have created a critical situation, damaging both to itself and the nation as a whole.

3.9 Major Causes of Urbanization

The basic causes of rapid urban population growth in Iran can partially be industrialization of the country. However, other factors, which results partly from industrialization, and partly from some other conditions, have been influential in determining the magnitude and the current levels of urbanization.

The effects of the Land Reform Program in Iran have also been of critical importance (Hill, R.N. 1973, p.201). Due to the implementation of Land Reforms, in 1963, the ownership of an overwhelming part of the land, formerly possessed by only arbābs (landlords) class passed over to the tenant cultivators who had till then the right to cultivate, but not to own land. In addition, approximately 25.0 per cent of the inhabitants of Iranian villages, comprising about a million families, were not tenant cultivators, but Khosh-neshins.* A great proportion of the Khosh-neshin population did not receive allotment under the Land Reform (Gudarzi-Nejad,Sh. 1977). Therefore a limited part of their income and livelihood continued to stem from work on the lands of the new farmer-proprietors, however, in general, their earnings from agriculture of the village declined. The majority of the Khosh-neshins, who had been engaged in animal breeding and work ancillary to agriculture and had been able to use fallow land in the village, were adversely affected by the nationalization of pastures and forests and by the transfer of ownership of the fallow lands to the new farmer-proprietors. Thus they began to lose rights of pasturage

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* The landless villager who worked in ancillary or non-cultivating occupations as shepherds, gardeners, craftsmen, barbers, bathkeepers, etc. and as the extra hands in the ploughing and harvesting season.

and to experience or expect a consequent reduction in their income. At the same time industrialization, together with general expansion in the economy of the cities, prompted a strong demand for skilled and unskilled labour. These powerful factors initially attracted young Khosh-neshins who had no ties with the land, and subsequently also drew young men from farmer-proprietors families, to the towns particularly to the bigger cities in search of a better life and of a new and more remunerative job or trade.

A study of the urban population increase in the country reveals that since 1963 the urban population has been swollen, not only by natural increase, but also by immigration of former villagers and nomads into the cities, both directly and indirectly through the rise in urban marriage and fertility rates attributable to the high proportion of the 20-40 age-group among the in-migrants, who have, in effect, imported rural birth rates and a skewed age distribution.

New investment by the landlords in the manufacturing industries around the cities such as Tehran and Karaj in the Central Ostan also added further enticement to rural peasants or villagers to migrate to cities because of the increased availability of well-paid jobs (Hill, R.N. 1973, p.202). The possibility of employment in construction activities played a particularly important role in attracting the rural population to urban areas. It is an easy and readily available source of jobs for the unskilled farmer in Iran since the techniques used for construction are generally not so advanced as to need long training. Moreover, the rapid expansion of urban centres has produced a severe shortage of housing facilities and a consequent surge of construction activities.

Finally, it should be pointed out that, in Iran as in many other developing countries, there is a great difference between living in cities and leading a distinctively urban way of life. Merely living in the city does not always mean living an urban way, for many towns and cities lack a distinctively urban character.

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CHAPTER 4

GEOGRAPHICAL STUDY OF EAST AZARBAYEJAN OSTAN

4.1 Introduction

Any study of population geography and migration movements within a specific area must pay attention to a careful study of the economic, physical and environmental factors operating in that area. Thus, before starting to study patterns of migration in East Azarbayejan Ostan (which is the core topic of this thesis) we wish to give a brief introduction to all such factors operating in this Ostan. These factors will be classified under the following sub-titles in this introduction : structure, relief, climate, soils, vegetation, water problems, agriculture, other factors of economy, settlement patterns and communication. It should be noted that these topics will be discussed very briefly, firstly because their deeper analysis is beyond the scope of this study, secondly because in many cases we face problems concerning the provincial boundaries; for example the administrative and political boundaries rarely coincide with the physical divisions, i.e. the physical features of the Ostan are not demarcated by its political boundaries and we find that the structure, relief, drainage basins and many other physical features of the two sections (East and West Azarbayejan) have not been studied separately but rather under the common topic of the Azarbayejan region.

4.2 Location

East Azarbayejan Ostan, with an area of 67,104 sq.km., lies between latitudes 36°47' and 39°30 north and longitudes 45°3' and 48°50' east.

The Ostan is bounded on the north by the U.S.S.R., on the west by West Azarbayejan, on the south by Zangan and West Azarbayejan and on the east by Gilan Ostan and the U.S.S.R. The Ostan consisted of 11 shahrestans, 34 bakhshes and 84 dahestans in 1976 (Fig. 4.1).

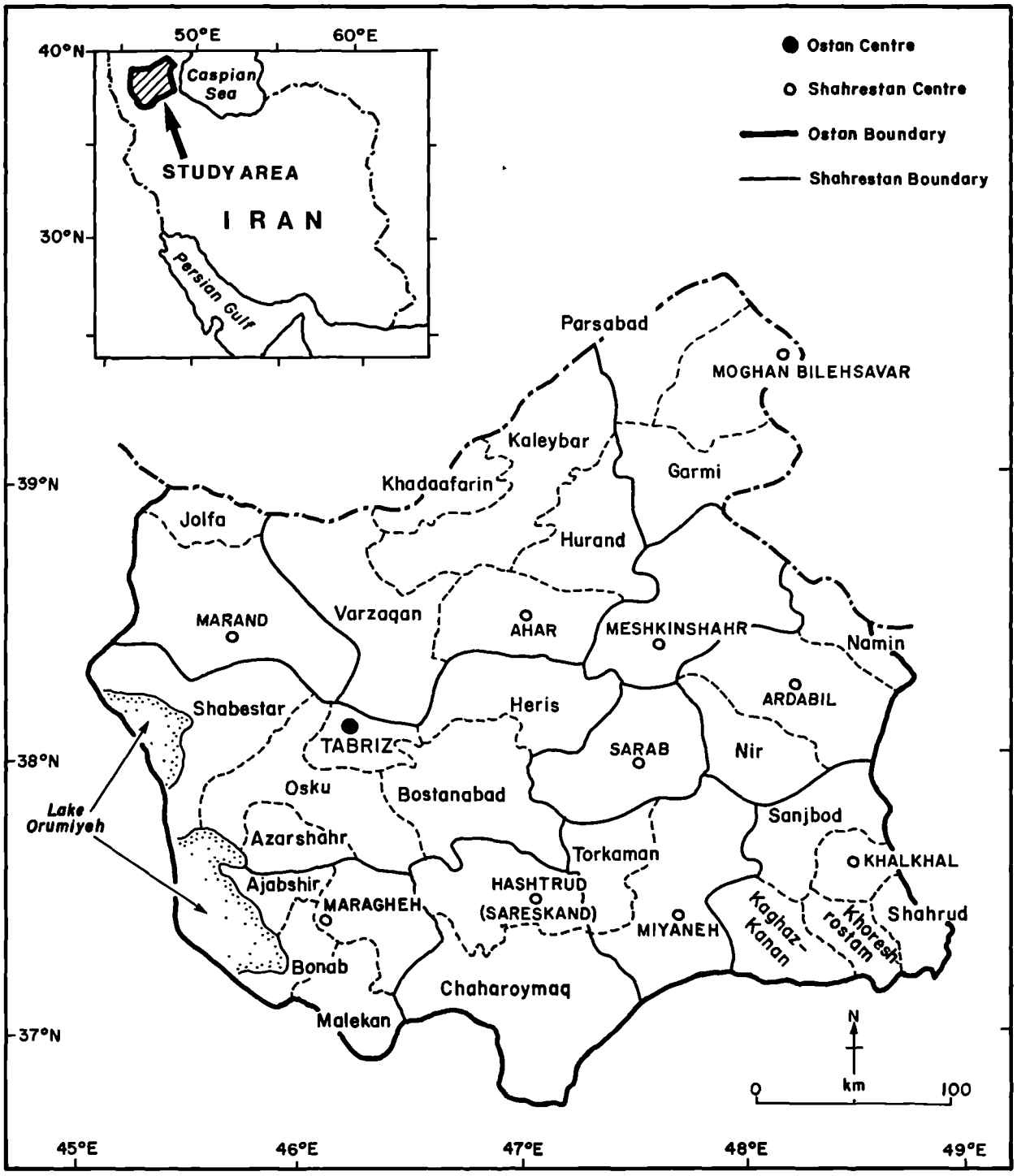

Figure 4.1 East Azarbayejan Ostan: Administrative divisions by Shahrestan and Bakhsh, 1976.

4.3 Historical and Political Background

4.3.1 Azarbayejan in early times

A major aspect of the history of mankind is the migrations of peoples all in search of a place to stay (Kubat, 1976, 11). These movements, which can be traced far back into pre-history, have gone on unceasingly for thousands of years, and the present distribution of man over the earth's surface owes much to migration movements in earlier times (Beaujeu-Garnier, 1978, 173). Indeed, as Pokshishevskiy (1984, 515) has pointed out, research on past migration often helps to explain the present pattern of a region's settlement and the character of its geographical-economic "skeleton" (the types of settlements, the road network, the sequence of land cultivation, etc.). Therefore, in order to have a better understanding of the present situation regarding population movement in Azarbayejan it seems necessary to look at its past.

Before going into details, it should be mentioned that, due mainly to the lack of reliable population data, a scientific examination of the population movements in Azarbayejan in the periods prior to the 1956 National population and housing census is not possible. However, an attempt is made to provide a general picture of the past population patterns of Azarbayejan by means of reviewing the historical sources.

Generally, as Trewartha (1970, 19) has noted, little of a specific nature is known concerning the population of the earth and its individual parts for more than a few centuries back. He has further pointed out that a century ago at least 80 per cent of the earth's inhabitants had not been counted. Thus, in the absence of direct statistical evidence on the various aspects of population of a region

in the past, population figures derived from historical sources seem to be of considerable importance in studying population in past periods. Only in statistically advanced countries, thanks to the availability of population data, is direct measurement of the population redistribution, at least over the past two centuries, a possibility. For example, in his examination of the changing nature of American cities due to the vast inflow of immigrants from the 1820's to the 1920's, Ward (1977) owes a great deal to the availability and the accuracy of population data for the period under study.

Although as Harvey (1976, 422) has pointed out the aim of historical narrative may be purely descriptive, such description is by no means devoid of explanatory elements. Each generation tends to select according to different criteria. The medieval historian may simply have recorded tempests and calamities, the nineteenth-century historian the reigns of Kings, the twentieth-century one the dates of important inventions. In the second place it is difficult to avoid hints at relationships, associations, and even necessary and sufficient connections, in a historical narrative. Nevertheless, despite these problems and shortcomings the employment of the historical narratives in the explanation of the past political, economic, and demographic situation of Azarbayejan seems to be unavoidable.

As a traffic route, Azarbayejan is an easy path. In the course of history, Azarbayejan witnessed the arrival and settlement of the Medians, the Persians, the Kurds, the Mongols and the Tartars who occupied most of Azarbayejan and particularly the area around Rezaieh (Urumiyeh Lake). For long centuries the Persian sovereigns protected this flourishing and fertile area, which served as the gate-way of Iran, and, by building fortifications, obstructed the way for many invaders who migrated from the steppes of southern Russia through Caucasia

(Bayani, 1974, 4). Although the major purpose of this section is to discuss the effects of historical and political events in Azarbayejan on its population redistribution, detailing all the historical events in the past centuries seems to be unnecessary and beyond the scope of this study. Therefore, after a brief discussion on the past history of Azarbayejan the recent history of the region will be reviewed and an especial emphasis will be placed on the examination of the important events of the nineteenth and twentieth centuries up to the late 1940's, an eventful period which has resulted in the present situation of Azarbayejan.

According to The International Geographic Encyclopedia and Atlas (1979, 60), by the 8th century B.C. Azarbayejan had been settled by the Medes. Azarbayejan is the traditional birth-place (7th century B.C.) of Zoroaster, the religious teacher and prophet.

The name of Azarbayejan is said to be derived from "Azar". (fire) and "bayejan", (keeper), and testifies to the ancient predominance of the fire-worshippers in this part of Persia. It is identical with the Atropatia or Atropatene of the classical writers (Curzon, 1966, 517).

According to The Encyclopaedia of Islam (1960, 188), the province was called after the general Atropates ("protected by fire"), who at the time of Alexander's invasion proclaimed his independence (328, B.C.) and thus preserved his Kingdom (Media Minor) in the north-western corner of later Persia. The dynasty of Atropates flourished under Arshakids who married into the royal house. The last scion of the house, Gaius Julius Artawazd, died in Rome in A.D.38, when the Kingdom was ruled and dominated by the Arshakids. Under the Sasanians, Azarbayejan was ruled by a marzuban and towards the end of the period belonged to the family of Farrukh-Hormizd. The capital of Azarbayejan

was at Shiz (or Ganzak), which corresponds to the ruins of Laylan (south-east of Lake Urumiyeh).

The Arab conquest of Azarbayejan is attributed to various dates between 639 and 643 A.D. In the days of Umar, Hudayfa b. al-Yaman is said to have conquered Azarbayejan coming from Nihawand (west of Azarbayejan); other expeditions came from Shahrazur (south of Azarbayejan). Hudhayfa made a treaty with the marzuban whose capital was in Ardabil. He agreed to pay 800,000 dirhams and the Arabs promised not to enslave anyone, to respect the fire-temples and the ceremonies held in them, and to protect the population against the Kurds (nomads) of Balasagan, Sabalan and Shatrudhan (east of Tabriz). Arab chieftains settled in various districts : in the region of Tabriz, Marand and south of Lake Urumiyeh (The Encyclopaedia of Islam, 1960, 190).

After the revolt of Babak, the grip of the caliphate on Azarbayejan weakened. The last energetic governors of the province (889-929) were the Sadjids who themselves were removed by a native uprising. After their fall native dynasties sprang up in Azarbayejan. After the Kharidjite Daysam (half Arab and half Kurd) Azarbayejan was occupied by the Daylamite Marzuban b. Muhammad, of the datini creed. The Daylamites in turn were succeeded by Kurdish Rawwadids (983-1070).

In the beginning of the eleventh century A.D. the Ghuzz hordes, first in smaller parties and then in considerable numbers, under the Seljukids occupied Azarbayejan. In consequence, the Iranian population of Azarbayejan and the adjacent parts of Transcaucasia became Turkophone. In 1136 Azarbayejan fell to the lot of the atabek Ildigiz whose descendants ruled, in competition with the Ahmadilis, till the short-lived invasion of the Kharizm-shah Jalal al-Din (225-31) at whose heels came the Mongols. With the arrival of the Il-Khan Hulagu (1256),

Azarbayejan became the centre of a great empire extending from the Oxus to Syria. The residence of the Mongols was at first in Maragheh and then in Tabriz, which consequently became a great centre of trade and cultural life (The Encyclopaedia of Islam, 1960, 190).

Discussing the effects of the Turks and the Mongol's invasion on the population of Iran, McEvedy and Jones (1980, 152) have noted that the first Turkish invasion, the migration to which the Seljúks have given their name, was not too destructive, for most of the Turks passed on to Turkey; more serious was the invasion of 1220 when the armies of Genghis Khan appeared from the north-east. For the next forty years Iran and Iraq were subject to merciless slaughter and a 25 per cent drop in population is a minimum estimate. McEvedy and Jones further add that by 1500 one million of the four million people living in Iran were Turkish-speaking nomads. The newcomers dominated the provinces of Azarbayejan and Khorasan.

After the Mongols and their successors the Jalairs, Azarbayejan was occupied by the Turkmens returning from the west (the Kara Koyunlu and Ak Koyunlu) whose capital was in Tabriz (1378-1502). It should be mentioned here that the Mongol's invasion brought about considerable changes in the settlement patterns of Iran. As de Planhol (1968, 414) notes, in many regions the peasants were obliged to leave their homes and adopt a nomadic way of life. In other words, as each Turkish tribe moved into the area the balance swung from agriculture to pastoralism. The effect was usually immediately visible in the form of a massacre of Iranian peasants by nomad Turks.

Bausani (1971, 108) writes : "when the Mongols entered in strength into countries with a highly developed culture such as Iran, this barbarian simplici led to terrible destruction and a radical disorganization. The ruin which they brought about in cities which they successively

conquered with astonishing ease, was appalling : only a few hundred people would succeed in saving themselves from the ensuing massacre. It has been said that some of the cities of Iran and Central Asia still show the consequence of this devastation to this day. Once flourishing cities were reduced for all time to small villages of few inhabitants and no importance and new commercial and cultural centres arose elsewhere. The Mongol invasion, like an earthquake, affected the very geography of the country." On the psychological effect of the Mongol invasion, Haas (1946, 118) writes : "considering the impact on the Persian mind of the centuries of Mongol invasion and domination, it can be safely said that anarchy, as the etymology of the world suggests, means absence of order and authority. In times of anarchy the individual will be thrown back on himself for the defence and the protection of his interests. Small groups may spring up that will try to perform some of the functions which the disintegrated large units, particularly the state, leave undone. So personal, as well as local and regional, individualism grew in strength. It is in harmony with such a development that this period, deplorable as it is from the national and political point of view, abounded in great personalities."

According to Bausani (1971, 113) during the period of the Il-Khanids the ruling class consisted of four social groups : the pastoral and warrior aristocracy, made up of Mongols, Turks and Kurds; the urban bureaucracy consisting mainly of Persians, some of whom, such as the house of Juvaini, were extraordinarily wealthy; the senior members of the Muslim religious hierarchy; and the remnants of the local provincial Iranian aristocracy who were not part of the central government. Mongol pastoral soldiers who had come to Iran with their families and slaves, continued to lead a nomadic life, spending the summer months in the pasturelands of Azarbayejan, Transcaucasia and

Khorasan. These feudal nomads remained faithful to their traditions and were little inclined to mix with the native population. Bausani (1971, 114) notes that the condition of the peasants at this time was appalling, for they were subject to anything from fifteen to thirty different kinds of tax or tribute. The officials employed as tax-gatherers were subject to no control, and on occasions, after collecting the sums due to the treasury, they made a second and even a third collection which went into their own pockets. Towards the end of the thirteenth century these various systems of taxation had turned whole regions into desert. The peasants had fled, and in many areas, only a tenth part the land was cultivated.

Describing the condition of towns-people during the period of Mongol rule, Bausani (1971, 116) notes that the towns destroyed by the invasion were slow to revive. The attempts of the Mongol governors, and later of the first Il-Khan, to rebuild these towns or create new ones were largely unsuccessful. Furthermore, the fact that the markets were no longer being supplied with farm produce from the neighbourhood meant that they dwindled in size, while the townspeople themselves were burdened with taxes and other obligations. One of the main taxes they had to pay was the tamgha, first introduced by the Mongols, which was levied on workshops, on trade - both wholesale and retail - and even on goods which the peasants brought to sell at the town markets, and on every product of the cottage industries.

In the absence of official data the above discussion may provide a general understanding of the social, economic and the living conditions of the population of Azarbayejan under the Mongols.

4.3.2 Azarbayejan under the Safavids

According to the Encyclopaedia of Islam (1960, 190) after 1502 Azarbayejan became the chief bulwark and rallying ground of the Safavids. The Safavids were a Turkish-speaking dynasty-cum-mystical brotherhood, whose doctrines were in many ways similar to those of the ahl-ihagg and the Shi'ite extremists of some of the Turkoman tribes of Asia Minor. There is no doubt, however, that they spoke a Turkish dialect of Azarbayejan. They were natives of Ardabil. Ismail, the Safavid conqueror of Persia, was only fourteen years old when, in 1499, he took over the leadership of the qizilbash (red heads) order. In 1500-1, he defeated the Shirvanshah Farrukh Yasar and ravaged Shirvan, near the modern Baku, routed the Ak-Koyunlu Alvand, seized southern Azarbayejan, and occupied Tabriz, which he made his capital and where he took the significant title of Shahinshah-i Iran (1501) (Bausani, 1971, 137). Between 1514 and 1603, the Ottomans frequently occupied Tabriz and other parts of Azarbayejan. The Persian control was restored by Shah Abbas but during the Afghan invasion (1722-8) the Ottomans recaptured Azarbayejan and other western provinces of Iran, until Nadir Shah expelled them (1747).

In the beginning of the reign of Karim Khan Zand (1750-79) the Afghan Azad Khan revolted in Azarbayejan. Generally, in Iranian history, a period from mid-Safavid to early Qajar times (roughly 1590-1797) is characterized by forced migration of population. Forced migration as defined by Perry (1975, 199) is the transportation of a considerable number of a population group (whether nomadic or sedentary), normally in family units and accompanied by livestock and cattle, to be permanently resettled in a region remote from their home; and undertaken as an act of policy by the ruler or his agents. Discussing forced migration in Iran during the seventeenth and eighteenth centuries

Perry (1975) has shown the extent to which different parts of Iran were affected by this type of migration. According to him, Azarbayejan was one of the major regions of Iran which experienced a considerable number of heavy forced migrations undertaken by Shah Abbas, Nadir Shah and Karim Khan Zand, during the seventeenth and eighteenth centuries.

During his campaign of 1602, Shah Abbas rounded up all the tribesmen to be found in Azarbayejan (the Aras valley east of Julfa) and resettled them further east, and transferred others southward from Qarabagh to defend the Cisaraxian (north) bank. During his campaign of 1603-5, Shah Abbas embarked on a systematic and savage depopulation of Greater Azarbayejan. From Tabriz, which he probably had hopes of retaining, only a proportion of families, mostly Armenian, were sent to Esfahan, but north of the Aras and west of Urumiyeh the country was laid waste and the population - sometimes of whole towns, such as Aqchaqala and Julfa - rounded up and herded "out of harm's way" onto the plain of Ararat. Resistance was met with massacre and mutilation; all immovable property - houses, churches, growing crops - was destroyed, and the whole horde of prisoners - Georgians, Armenians, Turks - was hurried south-east before the Ottomans should counter attack (Perry, 1975, 207).

In 1615 Shah Abbas continued his depopulation of Transaraxian Azarbayejan. Many of the settled populace who had fled from war-torn Qarabagh and Shirvan to Georgia were extradited and sent to Mazandaran, together with both peasants and tribesmen still in Qarabagh and Shirvan who were suspected of having collaborated with the Ottomans.

During the reign of Nadir Shah (1736-1747), as Perry (1975, 208) has pointed out, the depopulation of western provinces principally Azarbayejan was continued.

A consideration of individual movement will show that Nadir's primary motive was to fragment recalcitrant tribes, particularly in Azarbayejan and the central Zagros, by sending large numbers of them where he could keep them under surveillance. In 1738, after ousting the Ottomans from Tabriz, Nadir Shah transported 56,000 families of assorted tribes from Azarbayejan to Mashhad, where he reviewed them proprietorially before dispersing them to settle in the environs (Perry, 1975, 209).

Karim Khan Zand, too, practiced forced migration though, in a limited and modified manner. In 1758 various prominent chiefs of Tabriz, Salmas, Qarajadagh, and Shirvan accompanied him as hostages, together with some of their family and retenue, to settle in his capital of Shiraz.

4.3.3 Azarbayejan under the Qajars, 1779-1925

With the advent of the Qajars Azarbayejan became the traditional residence of their heirs-apparent. During the Qajar period, events in Iran became increasingly affected by Great Power rivalry until not only Iran's foreign policy was dominated by this question, but her internal politics also (Fisher, 1983, 356). It was during the Qajar period that Azarbayejan experienced the most dramatic territorial changes.

Between 1800 and 1828, a number of disastrous campaigns against Russia took place (Bausani, 1971, 165). From 1804-13, Iran and Russia continued to fight over Georgia. In 1813, following a heavy defeat, Iran was forced to renounce forever her claims to Georgia and other Caucasian provinces by the Treaty of Gulistan. In 1826, based on rumours of Russian oppression of Muslims, Fath Ali Shah launched a new Caucasus campaign that backfired. The Russians captured Yerevan in Armenia and even Tabriz in Azarbayejan. By the Treaty of Turkomanchay

in February 1828, Iranians were forced to accept the loss of Yerevan and the Na Kichevan districts. They also had to confirm the loss of places ceded earlier, including Georgia, Qarabagh, and Shirvan with its principal city of Baku (Aroian and Mitchell, 1984, 87). It was the Turkomanchay Treaty that brought into existence the present Russo-Iranian frontier between the Black Sea and the Caspian (Fisher,1978,183-4).

One of the most remarkable social and political events of the Qajar period was the Constitutional Revolution of 1905-11, in which Azarbayejan and Azarbayejanis played a leading role. As Holliday (1979, 22) notes, "it is important to register this event as the first in Iranian history in which an attempt was made to limit the power of the monarch and allot power to an elected assembly, the Majlis. The Constitutional Revolution was accompanied by considerable mobilization of the population in at least two towns, Tehran and Tabriz, and in its later stages there emerged an armed force, the Mojahidin, who fought to defend the gains of the revolution against those opposed to it - the Shah, the Russians and the tribal leaders." The people of Azarbayejan, particularly Tabriz, played a crucial role in supporting the constitutional movement which led to the establishment of a constitution and national assembly. By October 1906, the Majlis held its first meeting, and by December, the Constitution was approved and signed by both Muzaffar al-Din Shah and his son and heir Muhammad Ali (Aroian and Mitchell, 1984, 109).

Muzaffar al-Din Shah died on January 4, 1907, and was succeeded by the heir apparent, Muhammad Ali, who swore allegiance to the Constitution, but was soon engaged in efforts to desroy it (Upton, 1970, 16). Muhammad Ali Shah who had developed a reputation for ruthlessness while the governor of Tabriz (which had fuelled the Constitutionalist movement in Azarbayejan), had no intention of allowing an assembly to control

national spending or to encroach on his previous prerogatives of ruling by decree. He encouraged opponents of the constitution's secular thrust (Aroian and Mitchell, 1984, 109). A long struggle then began between the constitutionalists and the Shah. The Cossack Brigade formed during the reign of Nsir al Din Shah, which was under Russian officers and was the most effective military force in the country, played a major part in this struggle and was used by Muhammad Ali Shah to suppress the national assembly in June 1908 (Fisher, 1983, 357). It was at this time that the people of Tabriz kept revolution alive by the stubborn resistance offered to the royalists. Two men, Sattar Khan and Baghir Khan, were responsible for the resistance of the nationalists. Famine threatened to cause greater losses than actual fighting. The arrival of Russian troops in April 1909, nominally in order to save Russian subjects from famine, marked the commencement of a Russian occupation of Azarbayejan (Loudwig 1976, 631).

In July 1909, the Bakhtiaris and northerners defeated the Cossacks and entered Tehran. Muhammad Ali Shah fled to Russia while the Majlis placed his eleven-year-old son Ahmad Shah on the throne, under the guidance of regent Nasir al-Mulk.

In July 1911, when the ex-Shah landed at Gumesh Tappek (on the Iranian shore of the Caspian Sea), the standard of revolt was raised in Azarbayejan by his lieutenant Samad Khan. Mujallal-us-Sultan also tried to raise the Shahsevans in favour of Muhammad Ali Shah. Samad Khan managed to collect a fairly large force at Sarab, and threatened Tabriz, surprising the government camp on September 17th, 1911, and thus winning a minor victory, but the royalists made no further headway in Azarbayejan (Loudwig 1976, 631).

Describing Samad Khan's activities against the constitutionalists

in Tabriz, Good (1977, 140) has noted that Samad Khan the governor general of Azarbayejan participated in the first siege of Tabriz with pro-royalist forces. He nearly succeeded in defeating Sattar Khan, the head of the provincial government in Tabriz, and entering the city. In November 1908 Samad Khan suffered a set-back when Maragheh and Bonab, the urban centres of his province, were captured by the constitutionalists. In the winter of 1909, Samad Khan again regrouped with pro-royalist forces in the second siege of Tabriz. During his governorship of Tabriz Samad Khan continued his vicious attacks on the constitutionalists. Samad Khan's troops, in conjunction with other Qajar forces occupied the environs of Tabriz by the spring of 1909 and directly threatened the city proper. The siege was broken by the occupation of Tabriz by Russian troops.

In December 1911 the people of Tabriz goaded into doing something by the presence of Russian troops in Tabriz, and by the cruel ultimatums recently presented by Russia, suddenly attacked some Russian troops in Tabriz, and inflicted heavy losses on them. The Russians took very strong retaliatory measures, by hanging numerous "Fidais" and nationalists, including the Sighat-ul-Islam, whose execution being carried out on the holiest day of the Muharram, caused widespread disgust among Muslims. They also bombarded the famous citadel or "ark", damaging it considerably and destroyed the houses of those suspected of being anti-Russian. The Russians then took over the administration of Tabriz, including the police, treasury and justice. As Governor General of Azarbayejan Samad Khan ruled the province with drastic severity at the dictation of the Russian Consul-General of Tabriz.

In August 1912, Sipahdar, the Persian nominee for the post of Governor General of Azarbayejan, took over from Samad Khan at Tabriz, the Russians having withdrawn their opposition to him (Loudwig 1976, 632).

The events of the Constitutional period (1905-1911) in Azarbayejan are elaborately explained by Kasravi, A. (1967), a prominent historian and language reformer of Iran. Moreover, Vayjouyeh, M. (1976) an eye witness of constitutional period has detailed the events of this period in Azarbayejan, particularly in Tabriz. Unfortunately neither these nor other sources on the constitutional period in Azarbayejan provide a clear picture of the demographic characteristics of the population of the region for that period. This lack of information can be considered as the major impeding factor for measurement of the socio-economic and demographic situation of the population of Azarbayejan, not only in the constitutional period but also in its most eventful period of the first and the second World Wars, during which Azarbayejan underwent substantial socio-economic, political, and demographic changes. However considering the impacts of civil war and Russian invasion and the disastrous famines during the constitutional period, may reveal the extent to which the population of Azarbayejan was affected by these events.

Overall, as Good (1977, 139) notes, the period 1890-1914 was one of turmoil and strife for Azarbayejan, in which Kurdish and Shahsevan raids and uprisings, and Ottoman and Russian incursions were frequent. It was also an intellectually exciting period, particularly in Tabriz, as constitutional and parliamentarian ideas spread throughout the more intellectual, political, and progressive religious communities. It should be added here that the Constitutional Revolution (190-9) had a remarkable effect on the improvement of urban planning and city management in Iran.

In this context, Clark (1981, 282) notes that the Constitutionalist Revolution (1906-9) was essentially an urban based revolution which challenged the power of the tribal Khans. It saw city management in the hands of the elected representatives who formed city assemblies. He adds that the assemblies were the first and perhaps only, example of real public involvement in decision-making in urban Iran in the twentieth century.

4.3.4 Azarbayejan between 1914 and 1947

The outbreak of war in 1914 found the British and Russians in agreement to prevent German penetration toward the Caucasus and Persian Gulf (Lenczowki, 1949, 5). At the end of October 1914 the Ottoman Empire entered the war in a gamble which led to its own destruction and thereby brought the war to the frontiers of Iran. In an ineffectual attempt to avoid the storm Iran declared her neutrality. The Ottomans declined to recognize Iran's neutrality so long as Russian troops occupied Azarbayejan and the Russians refused to remove their troops. In December 1914 the Ottomans attacked Azarbayejan and in January 1915 their Kurdish allies briefly occupied Tabriz (Yapp, 1977, 17).

After the Bolshevik Revolution the Ottoman Turks held both Iranian and Russian Azarbayejan for a short time in 1918 and promoted the idea of a separate political unit. In 1920, Soviet forces re-established their authority along the old frontier line, the Aras river, which had since the Treaty of Turkmanchay in 1828 separated Russian from Iranian Azarbayejan. From time to time in the inter-war years Soviet propaganda was directed from across the border on occasion from Baku radio station (Greaves, 1977, 60).

With the end of the First World War and the 1917 revolution in Russia, the political scenario in the area changed. The Soviet leadership was preoccupied with the domestic political scene after the revolution and wanted Russian troops to withdraw quickly from Iranian territory (Lawless, 1980, 22). About this time there appeared the first traces of Azarbayejan self-consciousness.

In 1921, Reza Khan, an officer in the Persian Cossack Division, with British encouragement, carried out a coup d'état. After the coup d'état of 1921, the most pressing problem confronting the government

was to assert its control over provincial areas. On 31 October 1925 the Majlis declared the Qajar dynasty deposed. Reza Khan was proclaimed the new Shah on 12 December 1925. During the Second World War Iran declared her neutrality, but even so she turned down a request by the Allies to expel German nationals from her territory, and this led to Russian and British forces occupying Iran in August 1941. On 16 September 1941, under Allied pressure Reza Shah abdicated in favour of his son, Muhammad Reza.

1941-1947 was one of the most stormy periods for Azarbayejan in terms of socio-political changes. Throughout this period Azarbayejan was subject to foreign interference and military invasions which resulted in large and irretrievable human and economic losses. This may be attributed partly to the weakness of central government and partly to the strategic and geographical situation of Azarbayejan (nearness to the Russian and Turkish frontier).

As stated earlier, on the outbreak of the Second World War Iran declared her neutrality. In 1941 the Allies demanded a reduction in the numbers of Germans in Iran and, when no satisfaction was obtained, on August 25th 1941 British and Soviet troops invaded Iran. British power was centred in Kermanshah, and Russian power in Azarbayejan. As Lenczowski (1949, 195) notes, the arrival of the Red Army resulted in panic among the more prosperous elements of the northern provinces. Many left hurriedly and settled for the duration of the war in Tehran or in the south. Foremost among them were the big landowners. The Iranian government had to face the tribal problem following the Anglo-Soviet invasion. The north was the scene of tribal unrest. There the Kurdish tribes challenged government authority all through the war and frequently raided villages on the Azarbayejan Plateau, especially in the vicinity of Lake Urumiyeh (Lenczowski,1949,248).

The Iranian army disintegrated in Azarbayejan and Kurdistan. The tribes were able to obtain weapons and chiefs to return from exile to their people. Some of them took up the old tradition of pillaging (Kinnane, 1964, 48). This period as Gupta (1947, 114) has pointed out brought about acute economic crisis in Iran. For the first time in the country's history, food grains were imported into Iran, and the cost of living rose sky-high. In the north, the Soviet forces prevented the government from exercising effective authority, and freely exploited the region's agricultural and industrial resources (Issawi, 1971, 380). It is important to note that the Allies were directly responsible for wheat shortages in Iran. More than 75,000 Allied soldiers and officials were garrisoned in Iran, with their food and supply needs met only partially from outside sources. Tehran's major sources of wheat was Azarbayejan, yet Soviet officials acquired 50 per cent of their grain needs from Azarbayejan, allowing only 300 tons of Azarbayejani wheat to be shipped to Tehran from March 1942 to March 1943. In addition, Soviet occupation policies caused 200,000 Iranians to flee to Tehran swelling its population and food needs by 37 per cent (McFarland, 1985, 52).

Shortly after their occupation began, the Russians closed their zone to free entry; those Iranians and foreigners who wished to visit the zone were required to obtain special passes from the Soviet embassy in Tehran. The Soviets embarked upon a number of long-range policies designed to effect basic socio-economic and political changes in the northern Iranian provinces under their control especially Azarbayejan and Kurdistan. This eventually led to the establishment of a pro-Soviet Tudeh government in Azarbayejan, independent of the Tehran government (Saikal, 1981, 119).

Analysing Iran's social and economic problems after the Second World War, Keddie (1981, 119) has noted that the immediate post-war

years were characterized by a series of dramatic events that surpassed in scope the movements after World War 1. Wartime and post-war crisis conditions contributed to the appeal of movements aiming at a radical change in social and economic life. She further adds that the centre of post-war leftist activity, Azarbayejan was the province with the most radical traditions, and resentment against the central government was strong for many reasons. Azarbayejan paid more taxes than any other Iranian province without receiving commensurate benefits. The Azarbayejan Turki language was not taught or permitted for official business, and there was resentment against forced Persianization. The Russian presence in the province encouraged leftist forces and discouraged the right, especially as many large landlords fled when the Russians came in.

Discussing the insurrection in Azarbayejan and the Soviet role, Fatemi (1980,77) has placed an especial emphasis on the strategic significance and economic conditions of the province as the main reason for its postwar events. He writes : "of all the areas in Iran, Azarbayejan provided the most fertile ground for Soviet activities. The most northwesterly province, it was some 35,000 square miles in area. Rich in minerals, it was well watered and fertile, yielding a surplus of wheat, fruits and wool." He adds that Azarbayejan is situated in a strategic area. To the north are the Soviet republics of Azarbayejan and Armenia; to the west, Turkey; to the southwest Iraq. According to Fatemi (1980, 78) in 1945 population of Azarbayejan was roughly two million, composed of Caucasians (40 per cent) peasants of Turkish stock (50 per cent), Kurds (7 per cent); Armenians and Nestorian Christians (3 per cent). The Turkish peasantry was both the largest and the most influential group numbering around one million. Descendants not of Turks from Turkey but of related tribes, they settled in Anatolia during

the great Tartar migrations across Asia. A vigorous, war-like people from whom the Iranian army has long been largely recruited, they were known for their loyalty to the monarch in the seventeenth and eighteenth centuries. Their language was Azari-Turkic, identical to the dialect spoken in Soviet Azarbayejan. There were also the nomadic Kurdish element moving back and forth across the frontiers of Iran, Iraq and Turkey. Such freedom of movement across national borders was a ready source of disruption."

Thus, in Azarbayejan, conditions were ripe for a Soviet-inspired revolt. The Tudeh party was strong in Azarbayejan, but in mid-1945 it was replaced by a new united front party called the Democract party, which included a large coalition of groups and classes and stressed autonomist demands (Keddie, 1981, 119).

The Democrat party was administered by a central committee in the city of Tabriz. Pishavari was named its general secretary. District branches were established and sections were organized in the cities, towns and villages of Azarbayejan. The smallest unit was the village ward,which could contain anything from a dozen to several hundred people (Fatemi, 1980, 83). Democrats concentrated their propaganda on two basic demands : the right of Azarbayejan to have schools conducted in the Turkish language and to have provincial autonomy. While the first was acceptable to the central government, the second had serious implications, especially because of the presence of Soviet troops in the province. Talks on this subject between the Democrat leaders and Governor Bayat did not help to settle the issue. Following the distribution of large quantities of arms among the party adherents and the peasantry by the Red Army, the Democrats launched an offensive to seize power in the province. Gendarmerie posts were attacked and disarmed, government offices in various centres were occupied by the insurgents; prominent

officials, army and police officers and some industrialists and landowners were killed (Lenczowski, 1949, 288).

On 20 and 21 November 1945 the Democratic party held an "All-People Grand National Assembly" in Tabriz with 744 delegates representing 150 thousand inhabitants from all over the province (Fatemi, 1980,85). The new provincial government, headed by Prime Minister Jafar Pishavari, declared for autonomy.

Similar events occurred in Kurdish territory, some of which was Soviet occupied, and much of the rest close enough to be under Soviet influence. In December 1945, a Kurdish autonomous republic was set up and, although its leadership was non-Communist, it was supported by the Soviets. The Soviets kept the Iranian government from sending in troops to suppress the new governments. The central government asked Soviet troops to leave and, with American encouragement, placed a complaint before the United Nations Security Council regarding Russian interference in Iranian affairs when Soviet troops remained beyond the date they were to leave, six months after the end of the war. The Security Council decided to leave this to be negotiated between Iran and the Soviet Union. Troop withdrawal was agreed upon at the end of March 1946, in negotiation between the Iranian premier, Qavan and the Soviets (Keddie, 1981, 121). The two sides agreed that the Red Army would evacuate within a month and a half after March 24, 1946, however, as Saikal (1980, 34) has stated, the reasons why the Soviet Union so easily agreed to withdraw its troops and abandon the autonomous Tudeh regime in Azarbayejan have not yet been documented. But it seems that the Soviet decision was mainly a result of Moscow's increasing preoccupation with its interests in Eastern and Southern Europe and Qavam's political shrewdness in handling negotiations.

In November 1946, the Qavam government sent troops north to put down the Azarbayejan and Kurdish autonomy movements, which was done very brutally. Some leaders fled, some hid, but others were executed. In Kurdistan the leaders were shot, and numerous jailings also occurred in both areas. The economic and social problems of Azarbayejan and Kurdistan grew after the re-establishment of central government control, and there was a severe famine in Azarbayejan in the winter of 1949 (Keddie, 1981, 122).

The foregoing discussion reveals that historical and political events of Azarbayejan to a great measure have affected socio-economic and population patterns of this region. It can be understood also that in most cases, it is the unique strategic situation of Azarbayejan that has been responsible for foreign interference. Curzon's comment on Azarbayejan in 1892 provides a better idea about especial characteristics and marked individuality of this region. He wrote : "Azarbayejan is the province which, excepting only Khorasan, has more often been violated by foreign invasion than any other part of Persia; not seventy years ago it was the theatre of the last Russo-Persian war. Should that conflict ever again be renewed, it is all but certain to be the scene of the initial operations. Its northern borders march with those of the Russian Trans-Caucasian dominions, and its capital is less than 100 miles from the Russian frontier. On the west it is coterminous with territories of another power with whom Persia is on worse terms than with Russia - viz. Turkey - and the border land with whom is to this day a matter of dispute and an area of intermittent conflict." Turning to the internal problems of the region Curzon has added that the province contains within itself human elements that differentiate it from all other parts of the Kingdom. Here, and in the adjacent regions, are located the

famous and formidable Kurds, whose name has achieved a world-wide reputation as synonymous with a state of anarchy and deeds of blood. Emphasising the commercial importance of Tabriz and the fact that the language of Azarbayejan is not Persian but Turki, Curzon has concluded that Azarbayejan should be examined and regarded with no careless or superficial eye (Curzon, 1966, 514).

As discussed earlier contacts between Iranian Azarbayejan and Russian Transcaucasia and the fact that most of the people in Iran's Azarbayejan were Turki speaking whose Azari dialect was spoken also in Soviet Azarbayejan may be considered as an effective factor encouraging socio-political events in Azarbayejan from the very beginning of the twentieth century. The constitutional revolution of Iran to a considerable extent was affected by external factors, particularly by virtue of the contacts maintained between Iranian Azarbayejan and Soviet Azarbayejan. After the Russian Revolution of 1917 a Bolshevik group called Adalat ("Justice") was formed among the Iranian workers employed in the oil fields of Baku. At that time as Lennczowski, (1949, 97) has noted, about 300,000 Iranians lived and worked in the border regions of Russia, the Caucasus and Turkestan. The influence of the Adalat group and its leader; Haidar Khan Am Oglu, a veteran of the Tabriz revolt against Muhammad Ali Shah of 1908-1909, radiated to Iranian Azarbayejan. Agents were sent to Iran and in Tabriz the movement was supported by the Baku Tatars and by Armenians. Thus Iranian oil workers from Baku played an important role in the establishment of the Gilan Republic of 1920.

As mentioned earlier, on their entry in 1941 the Russians as part of their propaganda encouraged the use of Azari Turkish by publishing a newspaper in this language. The inevitable contrast was made with conditions in Soviet Azarbayejan where Azari Turkish had been allowed to develop in literature, in the theatre, and constituted a basic

element in a distinct cultural identity. It was to this identification that as Greaves (1977,60) has noted Pishavari and his party appealed in proclaiming the Azarbayejan separatist movement in the autumn of 1945. Thus in examining the political events of Azarbayejan the role of its language should not be neglected. Although it is difficult to examine the implications of Azarbayejan events in the wartime and post-war periods in terms of population redistribution and other demographic aspects, nevertheless, it is evident from the foregoing discussion that there has been a dramatic population outflow after the collapse of the Azarbayejan republic both to the Soviet Union and to various parts of Iran, particularly Tehran when Iranian troops entered Azarbayejan, as it is characteristic of regions after any political unrest. As Lambton (1969, 35) notes, from 1940 onwards there was an exodus from Azarbayejan because of proximity to the Soviet frontier and the uncertainty engendered during the war years by the presence of Soviet troops in the province.

Migratory movements due to political unrest are not unique to Azarbayejan. This type of migration can be traced in many other regions of the world. For example, examining the impact of political unrest on migration in Indonesia Naj m (1976, 169) found that the Communist uprising of 1926 affected not only west Sumatra but also Banten. Then there was the widespread Darul Islam movement in the early days of the Republic which found a stronghold in West Java, South and Central Sulawesi, South Kalimantan and Achen. In Maluku there was the separatist RMS (Republic of South Maluku) movement in the early fifties and there was the PRRI-PERMESTA rebellion in much of Sumatra and Sulawesi in the latter part of the fifties. All of these would undoubtedly have some impact on migration. Furthermore, according to the International Development Research Centre (1977, 52) the Darul

Islam movement, a Javanese revolt, reduced economic opportunities in rebel held areas so much that the towns of Tasikmalajs and Bandung grew by 390 and 480 per cent respectively. The PRRI (Permeta Rebellions in Central Sumatra led to heavy out-migration as troops of central government took over.

As Beaujeu-Garnier (1978, 180) notes wars and International disagreement have also produced migration, sometimes voluntary, sometimes forced. It has been estimated that the migration of the last twenty five years, bound up with the Second World War and the nationalist movements which followed it, constitute the great population movement of all time - perhaps 100 million people have been involved. According to Clout and Salt (1976, 20) 7,700,000 people were involved in Intra-European population movement associated with World War I. World War II was accompanied by massive shifts of population involving more than 25,000,000 people mainly in east central Europe.

Discussing the causes of mass migration to Calcutta, Datta-Ray (1984, 22) has noted that especial circumstances always provoked migration, as during World War I when, while agriculture were drastically slashed and the neighbouring peasantry impoverished, industry and employment in Calcutta enjoyed a wartime boom. The Bengal famine of 1943, the partition riots four years later and Bangledesh's 1971 liberation were held to further waves of refugees.

It is true as writes Beaujeu-Garnier (1978, 128) that most of these great movements are things of the past, but they have left obvious traces on the modern inhabitants and their civilisations and thus they deserve more than a passing glance.

In short, it can be concluded that in the examination of the present socio-economic and demographic characteristics of Azarbayejan, undeniable impacts of the past historical and political events should be taken into consideration.

4.4 Structure

Almost the whole of Azarbayejan is occupied by the north-western Zagros, which consist of a series of sedimentary rocks, chiefly of Upper Cretaceous, Miocene, and Plio-Pleistocene geological age, which have been much disturbed - partly by folding on a relatively restricted scale, but more especially by fracturing followed by differential warping. A further effect resulting from fracturing and dislocation of the rock series has been the rise of magma on a considerable scale, so that much of the land surface is now formed by extruded igneous material.

The general topographical effect is consequently that of a series of irregular tablelands, which lie at an average altitude of 1,500 to 2,000 m over much of the area, greater heights tending to occur in the extreme north and west, where the average elevation is between 2,000 and 3,000 m. The plateau surface also exhibit a general tilt that produces lower elevations mainly towards the south and east of this sub-region; and the overall effect of a stepped topography is further emphasized by fault-scarps which define a number of fault valleys and downthrown basins. One such major fault structure is the Aras valley which consists of a sequence of rifts or fault-troughs that later became joined as a single valley by the effect of river erosion. Consequently the Aras valley has alternate open and narrow sections - a gorge just below Julfa, for instance, contrasting sharply with much broader, open stretches above and below.

Largest of the downthrown basins is that of the Urumiyeh system, from which there is no drainage outlet, and other basins of similar structure but smaller extent are the lowland basins around Khuy, the upper basin of the Qareh Su river around Ardabil, and the associated tributary valley of the Ahar lying north-east of Tabriz.

Another element of much significance, and very often with striking topographical effects, is the superposition of large volcanic cones upon the high plateau surfaces. The best developed, but by no means the only examples, produce the peaks of Savalan (4,268 m), Sahand (3,700 m) and Ararat (5,166 m) - this last being just outside Iranian territory. Dislocation and readjustment of the rock series in this area have by no means ceased, and the region is thus subject to a considerable number of earthquakes. Especially vulnerable is the city of Tabriz, where building styles minimize the effects of earth tremors: one, or only a few storeys and light construction unless on a massive rock foundation. This liability to earthquake devastation is characteristic of much of Iran and of the north and west especially.

The final major influence in the evolution of landscape in the north-western Zagros has been that of river erosion. Because of its considerable altitude, rainfall is distinctly heavier over much of the plateau, with as much as 875 to 1,000 mm. in parts of the extreme west; and the effect of this is augmented by the seasonal onset, which concentrates the erosive effects into a short period. As a result, a number of deeply incised streams have cut considerable, often gorge-like valleys in less resistant strata (Fisher, 1968).

4.4.1 Relief

The mountain systems of Azarbayejan all emanate from the mountains of Kurdestan and, with the exception of the short spurs which run down from that range in the west of the Ostan to the Urumiyeh Lake, it consists of one major range which meanders through the whole Ostan (Fig. 4.2). This has its origin in Mount A.Kronal in about latitude 38°20', longitude 44°35'; from thence it goes due east,dividing drainage of Kohi from that of Salmaso, apparently under the name of the Kuh Mashuq, and running south of Marand, draining north to the Aras and south to the Aji Chai; to the north-east of Tabriz it takes the name of Kosha Dagh, shortly before which it throws a spur to the north called Shahvardi Kuh (which runs parallel with the Ahar Chai branch of Qareh Su river and ends south of the bridge of Khuda Afarin over the Aras). The Kosha Dagh still continues east,dividing the drainage of the Qareh Su from that of the Aji Chai to Savalan Dagh. At this point the ridge turns due south still dividing the Qara Su (which flows round from the south of the Savalan) to the north from the Aji Chai, till, at about latitude 37°50,it splits into two main ranges, one going east, the other west. The former maintains its east direction until longitude 48°35' when it also divides - one branch, the Bagru Kuh, runs northward and divides Talish from Azarbayejan, while the other, Masuleh mountains, runs south to the Qizil Uzun river and divides Gilan from Azarbayejan. The second main range, mentioned above, goes westward under the name of the Buzgush to the Sahand mountains. Here it turns due south (draining on the west to the Jaghatu river and on the east to the tributaries of the Qizil Uzun) as far as the latitude of Mianduab, when it gives a short turn east and then, resuming its southeasterly course,leaves the Ostan of Azarbayejan.

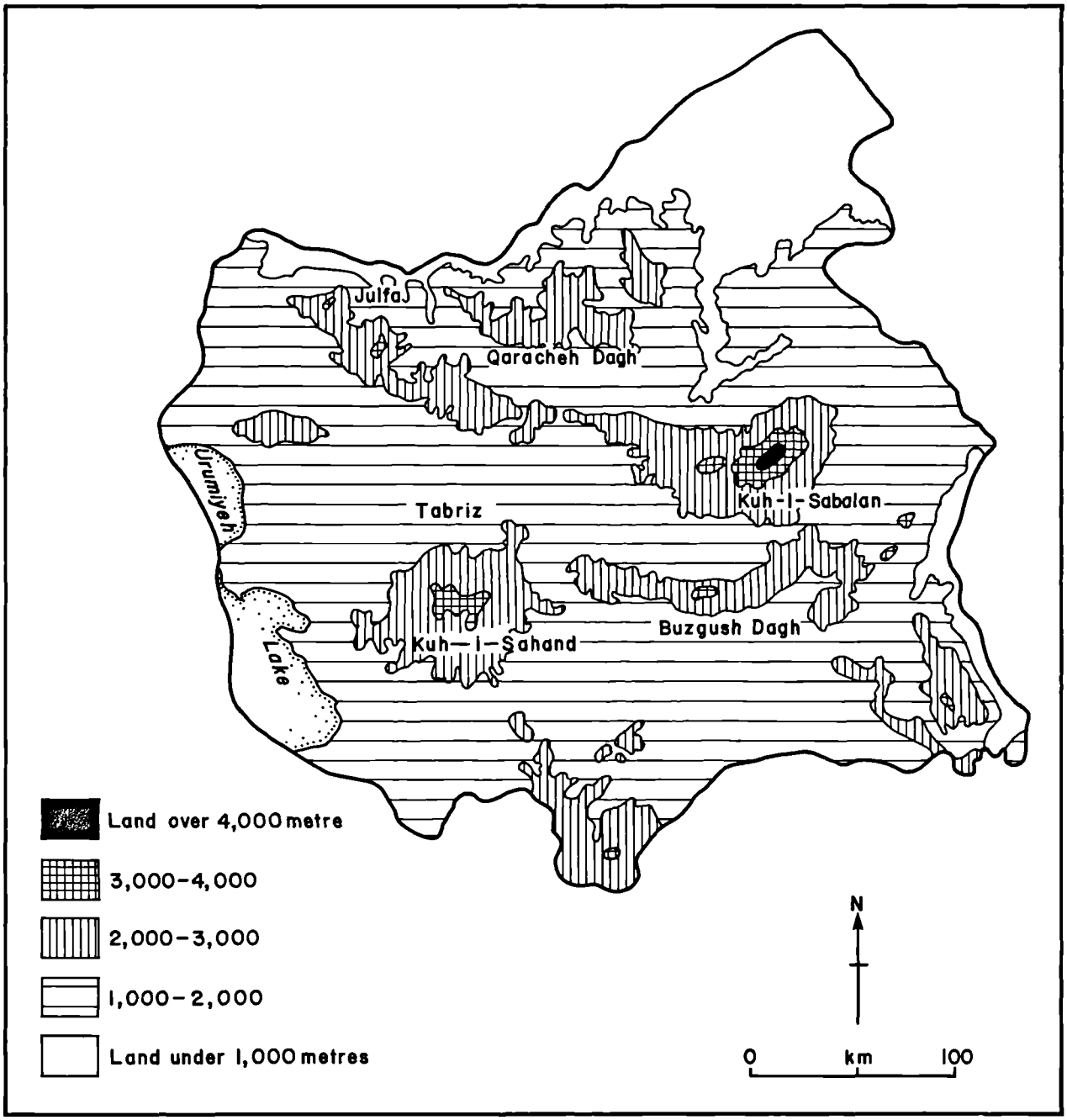

Figure 4.2 East Azarbayejan Ostan : Relief.

Source: Plan and Budget Organization of East Azarbayejan (1975), Atlas of East Azarbayejan Ostan, Tabriz.

The principal peaks of this range, which may with justice be termed the Azarbayejan range, are those of the Savalan Dagh, which reach a height of 4,268 m.and Sahand rising to 3,700 m, (Loudwig, 1976, p.67).

4.4.2 Plains

The plain country of Azarbayejan merely consists of the valleys of various rivers, which always have on their banks some level ground of greater or less breadth. On the right bank of the Aras there are some extensive plains such as that of Moghan with an area of 3,500 sq.km and there are also the plains of Ardabil with 2,140 sq.km, Tabriz, 3,000 sq.km, Maragheh 800 sq.km and Sarab with 1,890 sq.km.(Plan and Budget Organization of Iran, 1982).

4.5 Climate

Azarbayejan is well known for its very severe winters, when the entire plateau is invaded by cold air masses from the Soviet Union, the lowest annual temperatures anywhere in Iran are recorded at certain stations in these parts of the country, and these are much affected by spells of winter cold that can be of exceptional severity. The lowest value in the mean monthly maximum temperatures in Iran comes from some stations in Azarbayejan which in the hottest month show a mean maximum temperature of between 21° and 25°C. Also the lowest mean monthly minimum temperatures in the country comes from Bustanabad in Azarbayejan (10 miles to the east of Tabriz) with a mean monthly minimum temperature of -10°C, (Ganji,1968)

In East Azarbayejan Ostan altitude is an important influence on the amount and the character of precipitation, as well as temperature. Regions with high altitudes, such as Marand (1,534 m above sea level), Sarab (1,651 m), Tabriz (1,362 m) and Ardabil (1,350 m)

are characterized by markedly lower temperatures.

4.5.1 Temperature

Table 4.1 shows the mean monthly temperature recorded by 11 climatic stations in different parts of East Azarbayejan Ostan. There are considerable variation between regions in terms of mean monthly temperature. The effects of altitude on temperature can be understood by comparing the low -9.3°C of mean temperature of January in Tabriz (1,362 m above sea level) with the high 4.0°C mean temperature of January in Moghan (44 m above sea level). Overall, the highest mean monthly temperatures in almost all climatic stations are recorded in July and August and lowest in January and February. Among the 11 climatic stations, Tabriz shows the lowest mean temperature recorded in January (-9.3°C) and Julfa has the highest mean temperature recorded in July (31.4°C).

4.5.2 Precipitation

As shown in Table 4.2,in East Azarbayejan Ostan, 32.9 per cent of the average annual precipitation of 254.7 mm falls in winter, 37.3 per cent in spring, 23.8 per cent in autumn. Only 5.9 per cent of the total precipitation falls during summer. Sometimes there is no summer rainfall. Thus, more than 70.0 per cent of precipitation falls in winter and spring. Study of the monthly mean precipitation recorded in 11 climatic stations of the Ostan helps clarify the nature of the precipitation pattern. There are considerable variations between regions as regards the distribution of mean monthly precipitation. The largest amount of precipitation in Ardabil, Ahar, Khalkhal and Moghan occurs in January, in Marand and Hashtrud the highest mean precipitation is recorded in February, in Sarab and

Table 4.1 : Mean Monthly Temperature of East Azarbayejan Ostan Recorded in Climatic Stations, in C , 1980.

Station / Month	Tabriz	Osko	Ardabil	Ahar	Khalkhal	Sarab	Maragheh	Marand	Jolfa	Hashtrud	Moghan
Jan.	-9.3	-2.6	-	-1.8	-3.2	-	-2.1	-4.3	0.5	0.0	4.0
Feb.	0.2	-0.2	-3.2	0.3	-3.3	-	-	-1.9	2.6	3.0	4.5
March	6.2	4.4	0.9	4.6	1.4	-	-	1.7	9.6	4.9	7.6
April	9.7	10.4	9.0	10.7	8.4	9.6	-	9.6	16.1	12.2	14.3
May	14.3	15.4	11.8	15.3	12.2	11.3	17.1	14.9	21.8	16.2	19.9
June	18.3	20.2	14.7	19.2	15.4	15.1	22.9	20.9	27.3	20.8	24.3
July	24.6	26.1	18.5	23.4	21.4	20.5	28.9	25.8	31.4	24.0	28.5
Aug.	25.3	23.2	16.2	20.6	19.9	-	26.1	23.5	29.0	21.1	25.4
Sept.	23.0	18.0	14.4	18.9	14.4	-	21.2	18.0	23.4	16.1	21.7
Oct.	12.4	11.5	8.6	13.7	7.8	-	4.4	10.7	16.1	10.7	14.8
Nov.	6.3	6.9	6.1	19.3	4.0	-	9.3	6.8	11.3	10.1	-
Dec.	1.9	2.8	1.4	4.9	-0.1	-	5.0	2.1	6.0	8.5	-

Source : Plan and Budget Organization of East Azarbayejan Ostan, Statistical year Book of Ostan, 1980.

Table 4.2 : Average Percentage of Seasonal Distribution of Precipitation in East Azarbayejan Ostan, 1980

Winter	Spring	Summer	Autumn
32.9	37.3	5.9	23.8

Source : Plan and Budget Organization of East-Azarbayejan Ostan, Statistical Year Book of Ostan, 1980.

Table 4.3 : Mean Monthly Precipitation Recorded in Climatic Stations, East Azarbayejan Ostan in mm 1980.

Station / Month	Tabriz	Osko	Ardabil	Ahar	Khalkhal	Sarab	Maragheh	Marand	Jolfa	Hasht-rud	Moghan
Jan.	51.0	17.2	98.5	57.0	70.0	5.0	16.0	78.0	7.0	61.0	54.0
Feb.	40.0	28.2	81.5	36.5	33.5	19.5	27.1	79.2	4.0	83.0	47.0
March	21.0	53.8	50.3	31.5	57.2	36.0	58.8	28.8	64.0	46.5	49.0
April	35.0	56.9	36.5	28.0	57.7	27.5	75.6	69.8	30.5	65.0	38.0
May	33.0	27.6	54.5	29.5	59.0	34.0	36.8	64.6	9.5	69.3	44.0
June	16.0	8.0	8.3	14.5	5.0	2.0	-	5.2	2.5	19.5	51.0
July	-	1.0	2.0	-	-	6.0	-	2.4	-	-	-
Aug.	-	-	-	-	-	-	-	-	-	9.5	15.5
Sept.	-	7.5	-	4.0	-	-	-	14.0	10.0	32.3	48.0
Oct.	20.0	37.0	67.0	46.5	21.6	-	24.8	25.0	10.0	27.0	29.0
Nov.	52.0	64.3	53.5	19.0	66.4	17.5	9.8	52.6	28.0	25.0	-
Dec.	23.0	16.2	41.5	11.5	28.0	7.5	38.6	12.8	2.0	37.0	-
Total	291.5	317.7	493.7	278.0	397.7	155.0	357.7	432.4	168.0	475.1	375.5

Source : Plan and Budget Organization of East Azarbayejan Ostan, Statistical Year Book of Ostan, 1980.

Julfa in March in Tabriz and Osko in November and finally, in Maragheh the highest mean precipitation is recorded in April (Table 4.3). As shown in Figure 4.3, with increasing altitude to the south and in the surrounding regions of Sahand and Sabalan mountains, precipitation increases and also snowfall becomes more important. But the northern part of the Ostan, including Moghan in the northeast and Julfa in the northwest,which are much lower in altitude (44 m.and 704 m. respectively),generally have less precipitation.

4.5.3 Humidity

The mean monthly humidity data for the climatic stations of East Azarbayejan Ostan are presented in Table 4.4. The highest mean annual humidity level is recorded in Marand (76.0 per cent) and the lowest in Tabriz (58.0 per cent). The highest monthly mean humidity was recorded in Osko (89.0 per cent in January) while the lowest monthly mean humidity was recorded in Tabriz (36.0 per cent in September).

As stated earlier, winters are severe in East Azarbayejan Ostan, particularly in the mountainous regions of Sahand and Sabalan. Snowfall is quite heavy and frequent during the period November to March. Frost is a common phenomenon in the Ostan. The number of days with frost recorded for various years by climatic stations is presented in Table 4.5. Except in Moghan and Julfa, which are located in the north of the Ostan and have relatively mild winters, in the remaining stations the number of recorded frost days was well above 100. Sarab showed the largest number of frost days in 1980 (210 days).

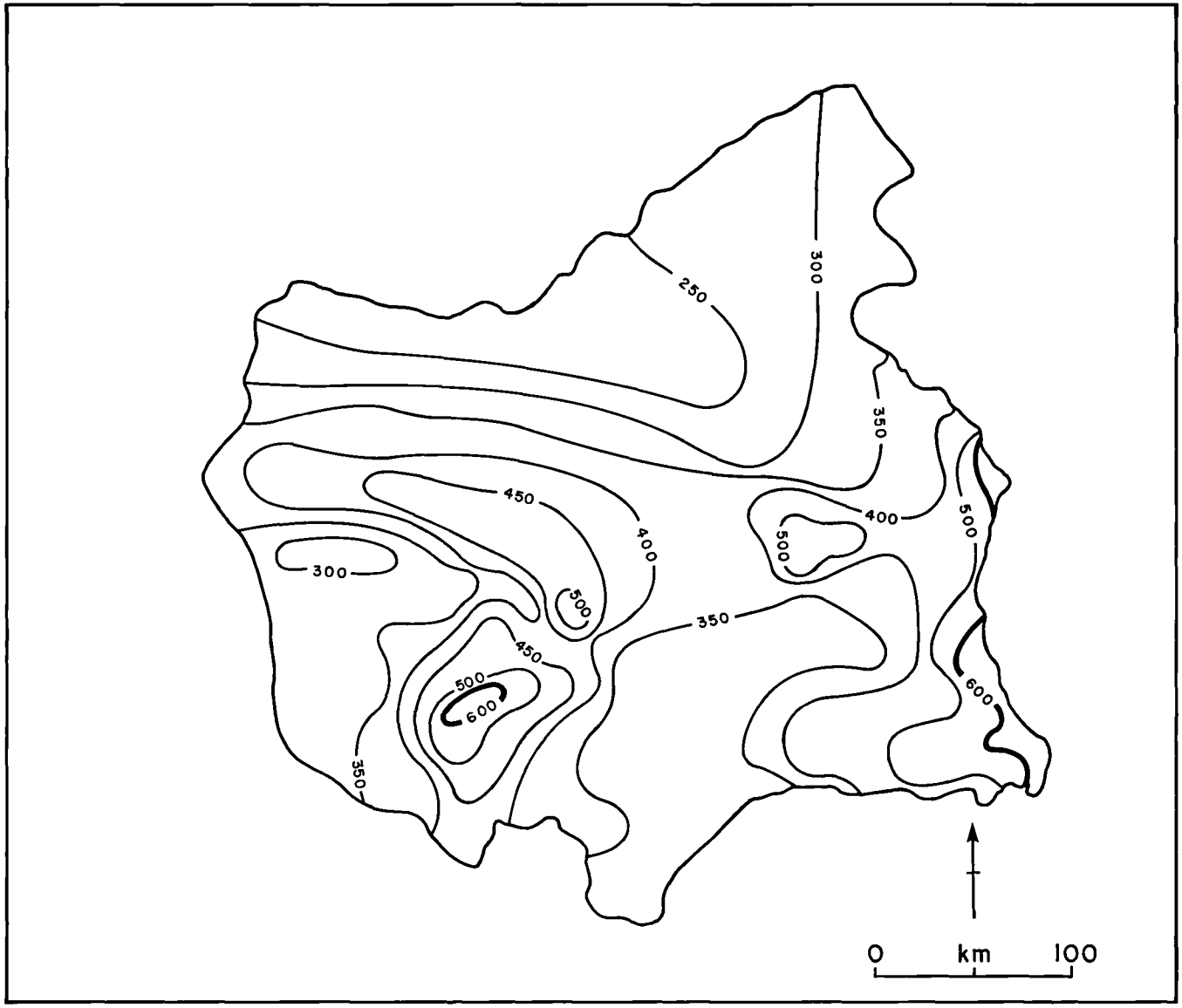

Figure 4.3 East Azarbayejan Ostan : Average annual precipitation.
Source: Plan and Budget Organization of East Azarbayejan (1975) Atlas of East Azarbayejan Ostan, Tabriz.

Table 4.4 : Mean Monthly Relative Humidity Recorded in Climatic Stations of East Azarbayejan Ostan, in per cent, 1980

Station / Month	Tabriz	Osko	Ardabil	Ahar	Khalkhal	Sarab	Maragheh	Marand	Jolfa	Hashtrud	Moghan
Jan.	71	89	69	65	95	-	83	84	81	74	79
Feb.	75	85	78	82	94	85	86	87	76	77	77
March	63	84	75	77	95	78	76	87	61	68	75
April	61	64	56	69	68	65	56	76	48	61	68
May	58	53	70	69	61	62	46	70	48	67	66
June	50	45	63	53	61	49	41	61	38	53	60
July	42	38	61	60	50	44	59	61	37	45	53
August	38	47	68	64	54	54	43	67	43	61	58
Sept.	36	51	70	72	48	48	40	68	48	65	64
Oct.	59	66	75	76	64	65	59	78	56	75	72
Nov.	67	77	73	72	74	76	75	84	73	65	-
Dec.	73	79	70	72	84	68	79	83	67	67	-
Mean Annual	58	64	70	69	70	62	62	76	57	65	68

Source : Plan and Budget Organization of East Azarbayejan Ostan, Statistical Year Book of Ostan, 1980.

Table 4.5 : Number of Frost Days Recorded in Climatic Stations of East Azarbayejan

Station \ Year	1972	1974	1975	1977	1978	1979	1980
Tabriz	124	117	111	90	94	89	83
Osko	-	112	135	-	131	128	122
Ardabil	137	136	139	115	115	134	129
Ahar	113	127	122	131	135	143	119
Khalkhal	-	-	-	160	152	145	155
Sarab	140	155	164	121	186	166	210
Maragheh	93	106	114	81	67	66	80
Marand	131	112	-	122	111	122	128
Jolfa	-	85	97	60	40	63	69
Hashtrud	-	-	-	-	-	-	-
Moghan	-	-	86	45	19	33	24

Source : Plan and Budget Organization of East Azarbayejan Ostan, Statistical Year Books of Ostan, 1972, 1974, 1975, 1977-1980.

In general, three different climatic regions can be distinguished in East Azarbayejan :

1. Mountain regions - which include Sabalan and Sahand highlands and surrounding areas such as Tabriz, Meshkinshahr, Ardabil and Sarab. Winters are typical of Azarbayejan, long, cold and snowy. In the warmer season, from late spring to early autumn, temperatures are moderate, rarely exceeding 30°C. Meshkinshahr, on the northern foothill of Sabalan, remains cool and also receives significantly greater precipitation up to 500 mm annually, much of it in summer showers, while Ardabil, Sarab and Ahar averages around 300 mm, mainly rainfall in spring and early autumn.

2. Steppe regions - such as Moghan region which is lower in altitude than the rest of Azarbayejan and is near sea-level; and being not far from the Caspian shares something of its humidity. Annual precipitation varies from 500 mm to less than 100 mm, averaging near 300 mm. Winters are mild, with few days of frost and only short periods of snow, but conditions are highly variable. Heaviest rains usually come in autumn (October), and particularly in early spring (March to April). Temperatures 40°C and constant fierce winds from the east, only occasionally alleviated in August and September by thunderstorms in the northern parts, makes life thoroughly unpleasant.

3. Transitional regions - southern and western parts of Azarbayejan, particularly Maragheh and Marand regions are characterized by this type of climate. Generally these regions can be classified between regions 1 and 2 in terms of their climatic conditions. In these regions annual precipitation is more than that of the other parts of Ostan.

4.6 Soils

Detailed information on the soils of Azarbayejan is confined to work on Iran as a whole by Dewan, M.L., and Famouri, J. (Soils, in Cambridge History of Iran, Vol. 1, Land of Iran, ed. by Fisher, W.B., Cambridge University Press, 1968). Figure 4.4 is based on Dewan, M.L. and Famouri, J. Figure 84 (p.252) where the following soil types are distinguished.

1. The soils of dissected slopes and mountains, which form the dominant soil type in East Azarbayejan. These soils are, in general, stony, shallow over bedrock, and without a definite profile development. They contain a high proportion of unweathered rock fragments, though there may have been some incipient weathering and accumulation of organic matter. The absence of profile development may be due to recent exposure of the parent material, or, more commonly, to the forces of natural erosion which are vigorous enough to remove finer textured soil material as fast as it is formed. These soils may be called lithosols. They are found in all climates, but are particularly associated with arid and semi-arid areas. Many of the mountain soils contain small areas of alluvial and colluvial soils, or residual soils (mainly lithosols), that are suited for cropland or improved pastures. The nomadic system of grazing in Azarbayejan depends to a considerable extent on such areas of better soils. These soils can be seen in most parts of Ostan, and cover almost the whole region of Ahar, Meshkinshar, Mianeh and Moghan.

2. Chestnut soils : these comprise dark-brown (chestnut-coloured) surface soil over a light-coloured material that overlies a calcareous horizon. The depth of the humus horizon varies from about 30-60 cm and is usually 40-50 cm. Chestnut soils are usually

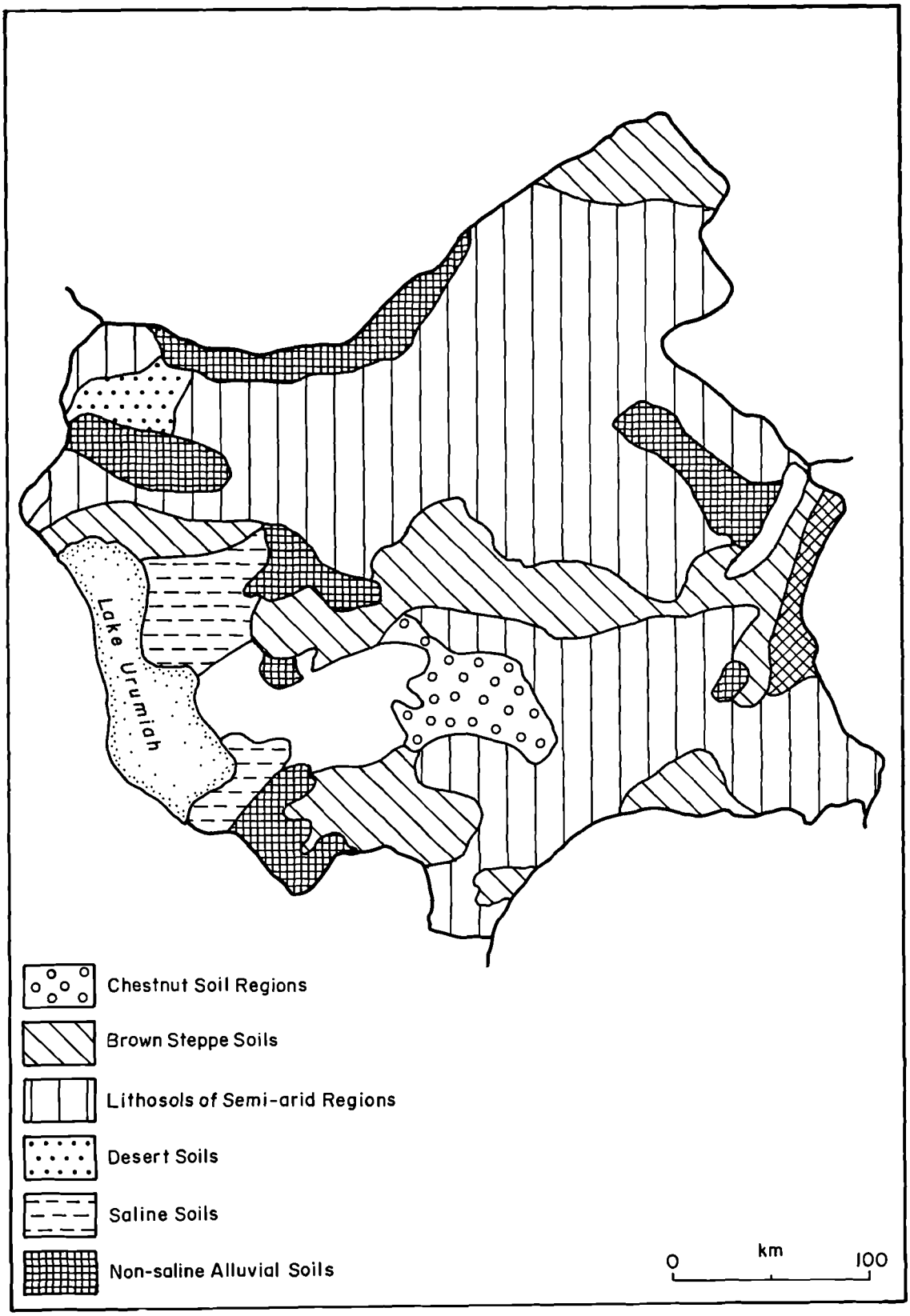

Figure 4.4 East Azarbayejan Ostan: Soil types.

Source: Adapted from Figure 84 (p.252), Land of Iran ed. by Fisher, W.B., 1968, Cambridge University Press.

neutral at the surface, and unless they occur on highly calcareous parent materials, they effervesce only when taken from depths of about 30 to 40 cm. The humus content of the surface soil usually averages about 3 to 4 per cent. In East Azarbayejan, chestnut soils cover an area of about 3,000 km which is divided between Tabriz, Hashtrud and Maragheh shahrestans.

3. Brown steppe soils - these soils are brown to light-brown, slightly alkaline (pH 7-8), and thus usually containing calcareous horizons. Usually eluviation is weak, although some brown soils show zones of accumulation of clay in the form of clay-skins and clay-bridges between aggregates. Well developed soil profiles with distinct texture, structure, colour, and reaction are rare and occur only on gentle slopes. The brown soils are moisture deficient during the summer months. These soils cover major parts of Tabriz, Sarab, and Hashtrud regions as well as the northern part of Moghan. Other types of brown soils - rendzinas, calcareous lithosols - brown and sierozem soils are all associations that occupy dissected slopes and mountainous areas of the Ostan.

4. Desert soils - desert soils are formed as a result of severe moisture deficiency. They commonly possess a thin surface crust, which consists of slightly cemented to strongly compacted materials. Horizon differentiation is non-existent or barely visible. The organic content is low (0.1-0.2 per cent in surface horizon), and the soils are calcareous throughout, usually having a shallow calcium carbonate horizon and an accumulation of soluble salts in the profile. In East Azarbayejan, the northern part of Marand is the only region which contains desert soils.

5. Saline soils (Solonchaks and Solonetz) - these soils contain large quantities of soluble salts, mainly sulphates, but chlorides of calcium, magnesium and sodium are also present. The solonchaks are commonly light-coloured and poor in organic matter, and they have a lightly crusted friable granular structure. Solonetz soils are the result of the partial leaching and alkalinization of solonchak, which may happen following irrigation - especially irrigation without proper drainage and management. These soils, including saline alluvial soils cover the western part of Tabriz and Maragheh region which lie on the eastern side of Urumiyeh Lake.

6. Non-saline alluvial soils - alluvial soils are composed of young, water-deposited sediments laid down on flat or gently sloping flood plains. They do not show a prominent horizon differentiation other than the formation of a surface organic horizon. Non-saline alluvial soils cover the nortern parts of Ahar and Marand shahrestans along the right bank of the Aras river. Also, the central part of the Marand region, the Aji Chai valley in Tabriz region, the southern part of Maragheh, the central part of Meshkinshahr and Ardabil are covered by these soils.

4.5.1 Vegetation

The Ostan of East Azarbayejan, apart from some of the higher mountains, possesses the same general features as many other parts of the Iranian plateau in the sparseness of its vegetation, in the scarcity of strict localization of tree and shrub communities, and in seasonal aspects. The flora, however, is different since its closest affinities are with Transcaucasia and Armenia to the north and northwest and not with the central and southern Iran. The soil

is fertile but produces little unless irrigated. The greater part of the country presents a desolate and barren appearance, mainly because of the absence of forest and brushwood and the very open nature of any herbaceous vegetation. Most of the land has to be described as semi-desert, merging at best into some open kind of steppe, if this term be used in a wide sense. It is only in the well-watered localities and at the higher altitudes that anything approaching luxuriant wild vegetation can be found. Orchards, often enclosed in mud-brick walls, are, however, a great feature of the country. The trees most commonly planted are almond, apricot, peach, plum, Elaeagnus angustifolius var. Orientalis (Turki ida, Persian sindjid, sometimes known as Persian dates) and, along the water channels, willows (esp. salix fragilis and S. medemii, the latter known as bid-i-Mishk, or musk willow), poplars, (populus euphratica), and small-leaved elm (ulmus glabra). Many arable crops are associated with the orchards. Under and between the fruit trees are sown wheat, barley, rye, cotton, or quite frequently the whole space is sown with hemp, castor-oil plants, and sesame.

Soil differences apparently occasion differences in the vegetation, though it is not possible to say how consistently the vegetation and soil types are correlated over the whole district. In the semi-desert parts, on ground with a loose upper layer (volcanic ash on various slopes) annual plants dominate a seasonally short-lived vegetation; on firm ground (gypsum slopes, limestone, and Tertiary conglomerate) perennials are dominant.

The flora and vegetation of the mountains in the north-western Iran are to a considerable extent, distinct from those of the hill and plateau country. Thus the flora around Yam pass, on the Tabriz-Julfa

road, and on the Kuhi-Mashu (or Mashu Dagh) differs in many respects from that in the vicinity of Tabriz. North of Sufian the landscape changes rapidly. Green meadows appear in the Aras basin, interspersed with the more typically Persian flora are to be found plants common in Europe, such as purple Loosestrife, marsh orchids and slfheal (Prunella vulgaris). Around Yam itself and in the mountain meadows and damp grassy places on Mashu Dagh the grass of parnassus occurs plentifully, and in the higher reaches of the mountain the common juniper is abundant. The flora of the Sahand volcano to the south of Tabriz is rich and also contains many endemics, but there are no modern accounts of its vegetation, nor of other high mountains such as Savalan Dagh in this district (Naval Intelligence Division, 1945, pp.198-200).

4.7 Water Problems

While Iran as a whole may be regarded as an arid country, it is important to realize that some areas do receive high precipitation totals (Gilan, Mazandaran, Azarbayejan) (Beaumont 1973, p.2). Outside the Caspian area, Azarbayejan receives the highest precipitation in Iran. Also there are significant number of rivers and streams in this Ostan. The perennial streams of the Ostan are maintained throughout the rainless summer and early autumn by snow-melt and contributions from springs, which are specially copious in the limestone highlands of the west, (Oberlander, 1968, p.268).

There are three types of water supply, from wells, from qanats and direct from rivers and streams, of which the last is by far the most important source of irrigation water. However, the water supply from surface flow is less reliable than that obtained through qanats since the flow of many Iranian rivers is highly erratic and very seasonal.

It should be noted here that 52.0 per cent of the total irrigated lands in East Azarbayejan are irrigated by rivers and streams, 35.0 per cent by qanats and the remaining 13.0 per cent by wells. Despite the geological and technical difficulties experienced in some areas, such as Sarab, several deep wells have been constructed in various parts of the Ostan such as Mianeh, Marand, Maragheh and Ardabil. Due to the topography of the area and the lack of a unified method of water control and utilization, there are serious problems in irrigation of some regions in this Ostan.

The largest rivers of the Ostan which play a great role in agriculture and the economy of the area and country are as follows:

1. The Aras on the north with its tributary, the Qareh Su, which receives the north drainage of Kuh Mashuq, Kosha-Dagh and Savalan Dagh. 410 km.of the Aras river forms the common boundary of the Soviet Union and Iran and the Russians have built a bridge across the Aras intended for the railway from Julfa to Tabriz. Due to dam construction on the Aras the irrigation network in northern Moghan was expanded to over 70,000 ha.in the 1970s and Moghan has become the centre of an agro-industrial complex.

2. The Qizil Uzun, on the east with its tributaries, the Qarangu and Aidughmish, which collect all the water of the Buzgush and Sahand mountains. Mean annual water supply of Qizil Uzun is about 2,220 million cu.m which is the main source of irrigation in Mianeh, Khalkhal and Hashtrud regions.

3. The Aji Chai (Talkheh Rud) in the Tabriz plain. The Aji Chai is contained between two broad plateaux running east and west nearly 64 km. In the upper part of its course and in the tributaries

(Sarab region) the clear waters from Savalan Dagh and Qara Dagh are used for irrigation and watering stock. In the lower parts of its course (Tabriz region) the Aji Chai cuts deeper and becomes contaminated with salt and gypsum dissolved from neighbouring beds. Aji Chai is the major source of irrigation in Tabriz, Sarab, Bustanabad and Heris regions, and its mean annual supply is about 392 million cu. m.

Although there are a significant number of rivers and streams in East Azarbayejan and also annual precipitation is relatively high, agriculture is dominated by dry-farming in most parts of this Ostan. Furthermore, there are serious problems in terms of urban water supply in some cities and towns of the Ostan due to various physical and technical facts. Tabriz, the Ostan's capital, for example, is characterized by a relative absence of good water, many mineral springs and solid deposits associated with the nearby volcanic complex of Mt. Sahand render much of the surface water brackish, and supplies are brought with considerable difficulty by qanats from relatively few and distant sources, (Fisher, 1968). According to the 1976 census, the water supply of 39.5 per cent of the Ostan's private households residing in dwelling units was provided from public reservoirs, 13.0 per cent from wells, 2.1 per cent from qanats, 37.9 per cent from springs, 6.9 per cent from rivers and 0.6 per cent from other sources (Plan and Budget Organization of Iran, 1976).

4.8 Physical factors and population movements

Neither migratory movements in general nor rural-urban migration in particular can be attributed solely to economic factors such as the opportunities for employment and related activities, nor to social factors such as educational facilities. Physical, environmental and ecological factors, such as the geographical location of places, the availability of water, the fertility of the soil and the climatic conditions of a region, as well as the availability of agricultural land all play an important role in population redistribution.

In Iran, studies dealing with migration have placed an especial emphasis on the socio-economic factors, mainly because of the economic development of the country over the last 25 years which to a great extent has been seen as the major cause of rural-urban migration. Consequently the significance of physical factors in population redistribution has been largely neglected.

The movement of people due to the ecological and natural forces is often referred to in the literature as 'primitive migration'. This type of migration, as defined by Kammeyer, (1972, 56) occurs when people are unable to cope with natural or ecological forces and move in order to survive. Primitive migration may be either conservative, as when people try to find a new place that is like their home under earlier conditions, or innovative, as when people seek out a new way of life. For example, people who move to the city after their agricultural land fails to provide an adequate livelihood are engaged in innovative primitive migration. In primitive migration the emphasis is on survival in the physical sense. If people do not move, they will not survive. For example, changes in the quality of soils in rural areas which to a considerable measure affect the productivity of

agricultural lands may result in rural-urban migration. Phillips (1959, 420) notes that once-fertile but now salinated soils of the southern and central regions of Iraq have led to increased levels of migration from there to the northern sectors. He adds that the origins of rural-to-urban migration in Iraq are to be seen in regional differences in agricultural productivity. He concludes that adverse physical factors, particularly soil salination where irrigation is practiced without drainage, further reduce southern yields. It is not surprising, therefore, that the largest volume of internal migration is from the central and southern parts of Iraq to the northern parts of the country.

In East Azarbayejan, population movement due to the unfavourable physical conditions of regions can probably be identified as innovative primitive migration.

Despite the fact that there are no empirical studies detailing the impact of physical and environmental factors on population movement in Iran as a whole or in East Azarbayejan, a consideration of the volume of out-migration from and the physical conditions in certain regions such as Sistan-Baluchestan, confirms the occurrence of this type of population movement in various parts of the country. Migration of more than 98,000 persons from the Ostan of Sistan-Baluchestan in the extreme southeast of Iran, mainly to Mazandaran Ostan in the north and to Khorasan Ostan in the northeast of Iran may well be attributed to the unfavourable physical and climatic conditions of the Ostan of origin. Thanks to the availability of water and agricultural lands Mazandaran Ostan attracted more than 68,000 migrants from Sistan-Baluchestan Ostan between 1966 and 1976 (see Chapter 2). It should be added here that migration from Sistan-Baluchestan was reinforced by the construction of a dam on the Hari-rud river in Afghanistan which reduced the flow on a river which had been the main source of water supply in this Ostan

until 1968. Thus, environmental conditions such as terrain, soils, climate, and water supply play an important role in population redistribution. Furthermore, failures of agricultural production as a result of droughts and other ecological problems damages to a great measure result in the rural-urban migration. For example, as Lambton (1969, 130) has noted, in 1964 in the Miankuh district of Yazd, fruit and walnut trees were killed by the cold; and the Pusht-i-Kuh district was virtually emptied of able-bodied men who were forced to emigrate in search of work.

In East Azarbayejan Ostan human response to the environmental disadvantages such as the lack of adequate and regular water supplies for crops and livestock can be best seen in the nomadic-pastoral way of life of the Shahsavan tribes in northeast of the Ostan. The Shahsavan are pastoralists with farming interests and are involved in a cycle of spring and autumn migration. As stated earlier, they move to the warm plain of Moghan in autumn (winter quarter) and in the spring they return to the highest mountain pastures of Sabalan (summer quarter). Indeed as Sunderland (1968,643) indicates, in the absence of plentiful supplies of water for irrigation schemes, the nomadic-pastoral way of life is an admirable human response to the ecological conditions which more satisfactorily allows the full utilization of natural resources and at the same time sustains the complex social life and well-being of large communities.

In East Azarbayejan, apart from the scarcity of water which may be considered the dominant factor in failures of agricultural production, the geographical location of villages seems to be the most important factor reinforcing rural-urban migration. Considering the location of villages and the volume of out-migration in different Shahrestans of the East Azarbayejan Ostan shows that the number of migrants from

Shahrestans where the majority of villages are located in the mountainous areas is considerably larger than that of the Shahrestans where their villages are mainly located in plains enjoying fertile soils and a good supply of water for irrigation, together with transportation facilities which are all of fundamental importance for agricultural activities. For example, Ahar Shahrestan, which has the highest number of mountain villages (721 out of a total of 986) among the 11 Shahrestans of the East Azarbayejan Ostan, has also been the main Shahrestan of out-migration in the Ostan (see Chapters 6 and 7).

The remoteness of the villages from the Ostan and Shahrestan centres and the mountainous location of villages also to a great measure affects the agricultural activities of peasants and encourages the rural-urban migration.

The locational factor, that is the proximity to the centres of political and/or economic activities has been described by Naim (1976, 159) as one of the causative factors for migration in Indonesia. Discussing the effects of the locational factors on migration in Indonesia, Naim has shown that in a situation where both ecological and locational factors are favourable the intensity of migration is low by contrast to areas where these factors are not favourable, in which the intensity of migration is high. Emphasising the effects of the locational factor, Naim has indicated that, in a situation where the ecological factor is favourable but the locational factor is not favourable, the intensity of migration is high, while where the ecological factor is not favourable but the locational factor is favourable, the intensity of migration is low (Naim, 1976, 160).

Since dry darming is the dominant system of agriculture in the mountainous villages of the East Azarbayejan Ostan, the failure of

agricultural production due to the lack of rain during dry seasons is a common phenomenon in the Ostan. Thus, migration of the peasants towards the urban areas may be considered as a response to the unfavourable physical and climatic conditions of the mountainous villages.

Examining the rural exodus in the oasis region of North Chile, Bahr (1977, 146) has shown that the main reason for migration of the farmers is the failure of agricultural production due to the practice of dry farming which he describes as a risky form of agriculture. According to Bahr, out of 212 persons who were asked, more than half said that their motive for leaving home was to search for alternative work. The rural exodus has not only radically altered the appearance of the villages in the oases (abandoned houses, uncultivated fields) but has also decisively changed the age-structure of the remaining population (Bahr, 1977, 160).

The availability of social and educational facilities in rural areas also affects rural-urban migration. There are considerable differences between Shahrestans of the East Azarbayejan Ostan in terms of the availability of social and educational and public facilities in general and between the mountain and plain villages of the Ostan in particular. The provision of these establishments and facilities seems to be more difficult in the remote and mountainous villages of the Ostan compared with those located in the plain region with favourable physical conditions. For example, according to Plan and Budget Organization of Iran (1981, 5) of the total of 97 clinics in rural areas of the East Azarbayejan Ostan in 1976, only 10 were serving the 986 villages of Ahar Shahrestan while there were 21 clinics in the rural areas of Tabriz Shahrestan serving the inhabitants of its 481 villages. Considering the number of doctors in the rural areas of different Shahrestans of the Ostan reveals that there were 79 doctors

for 481 villages of Tabriz Shahrestan whereas, surprisingly, doctors in the rural areas of Ahar Shahrestan containing 986 villages numbered only 21.

The gap between rural areas of the 11 Shahrestans of the Ostan becomes remarkably wider when the availability of other public facilities such as electricity, piped water and post offices, educational facilities such as schools and economic and social facilities such as banks or co-operative stores are taken into consideration. Apart from the insufficient regional planning which may have been affected by many technical and economic factors, physical, environmental conditions of the Ostan have played a considerable role in the uneven distribution of these facilities between the rural areas of the Ostan on the one hand and between rural and urban areas of the Ostan on the other. Insofar as these inequalities between various parts of the Ostan are at work,migratory movements of population from areas with little or no socio-economic facilities toward the areas enjoying such facilities seems to be continued.

Seasonal migration occurs on a considerable scale in East Azarbayejan, though little empirical research has been carried out in this connection so far, and precise data are not available. However, based on personal observation a few comments can be made in this respect. This type of migration is similar to the short-term movements of farmers which is discussed by Jones (1981, 245), and is termed circulation. This type of movement is usually repetitive and there is no intention of any long-lasting change of residence. After the main harvest, migrants leave for the cities where construction employment is at its height in the dry season, and they return to plough, plant and weed their farms at the onset of the rainy season. They thus maximize their returns from both the subsistence and the monetary economics. This

type of seasonal migration can be observed in various parts of the East Azarbayejan Ostan, particularly in the suburbs of the Ostan's major cities where construction activities require unskilled labourers. It should be noted that this type of migration has long been practiced by villagers and farmers in East Azarbayejan and is reinforced by the construction employment opportunities in recent years when low-priced government land, usually on the outskirts of the cities, was distributed among a large number of homeless civil servants who had to build their houses in a limited period of time.

A considerable number of the seasonal migrants usually find work in brick-making factories of the Ostan. In this respect, the brick-making factories of Azarshahr, 50 km. to the south of Tabriz, may be considered as a striking example where a large number of these migrants are employed temporarily. Some of these migrants come even from the rural areas of other Ostans such as Kurdestan and West Azarbayejan.

Overall, data on seasonal migration are insufficient and mostly unreliable in developing countries while in the statistically advanced countries investigation in the demographic characteristics of seasonal migrants has been an interesting topic for geographers, demographers and other social scientists in recent years. For example, Massey and Mullan (1984, 501) have examined the patterns of fertility among families in the Mexican migrant town of Guadalupe, Michoacan where, according to their findings, 75 per cent of families have a member working in the United States. They found that the seasonal absence of migrant husbands disrupted both the level and timing of fertility and that the effect was greater for legal than for illegal migrants, a pattern which, as they showed, stemmed from social factors as well as physical separation.

4.9 Agriculture

In East Azarbayejan cultivation follows the general Iranian pattern, with cereals (wheat, barley and some maize) as the basic crops and a wide range of fruits and vegetables. Mediterranean fruits - vine, almond, and apricot especially - grow very well in the more favoured parts of this region; and cotton, tobacco, and oil seeds are also important. Chief areas of cultivation are (1) those parts of the middle and higher Urumiyeh basin away from the saline areas, especially the valley of the Aji Chai leading to Tabriz; (2) parts of Qizil Uzun lowlands, particularly around Mianeh and a tributary valley, that of the Zanjan river; (3) the Qara Su valley around Ardabil; and (4) the Khuy basin and adjacent parts of the Aras near Julfa (Fisher, 1968).

East Azarbayejan covers an area of approximately 6,710,200 ha. of which 1,741,819 ha. or 26.0 per cent of the Ostan's total area, has been brought under cultivation. Natural pastures, forests, and barren lands are not, however, included in the land under cultivation. Annually 1,047,261 ha. are cultivated, of which 314,260 ha. or 30.0 per cent is irrigated and 733,002 ha. or 70.0 per cent is under dry farming. Land given to fallow totals 650,419 ha. In other words, 37.3 per cent of land under cultivation is left to fallow every year, 139,600 ha. or 21.5 per cent, of which is land from irrigated fields and 510,819 ha, or 78.5 per cent from dry farming.

Man-made pasture lands in East Azarbayejan, whether irrigated or dry farmed, cover an area of 157,522 ha. or 15.0 per cent of the total cropped land,while the natural pasture land available, but not utilized totals 101,817 ha.

Wheat covers 621,683 ha. or 59.4 per cent of cropped land, barley 157,875 ha. or 15.0 per cent, while 110,181 ha. or 10.5 per cent of cropped land is given to sugar beets, rice, cotton, potatoes, vegetables, oil seeds and similar crops. Thus wheat and barley accounted for more than 74.0 per cent of cropped land. Agricultural productivity is also low. Irrigated wheat fields have a yield of 654 kg. per ha. and dry farming wheat cultivation gives a yield of 424 kg. Rice gives a yield of 1,850 kg. per ha., sugar beet 8.4 tons per ha.

The main fruits of this Ostan are grapes, apples, pears, quince, almonds, walnuts and plums. Grape production amounted to 30,265 tons in 1974. 8,860 ha. or 20.0 per cent of total of 44,139 ha. permanent agricultural land such as orchards is given to vineyards. Cultivation of fruits, such as plums and peaches assumes a great importance and occupies 18.0 per cent (7,855 ha.) of permanent agricultural lands. In 1974 the total production of these fruits amounted to 18,561 tons. Almonds are grown over an area of 10,057 ha. accounting for 22.8 per cent of permanent agricultural land. The total production was 5,803 tons in 1973 representing an important item in the dried fruits exports of the Ostan

According to the Plan and Budget Organization of the East Azarbayejan Ostan (1983, 50), in 1982 the land

in the Ostan under perennial crops amounted to 118,128 ha. of which 85,165 ha. was given to vineyards and the remaining 32,963 ha. was occupied by cultivation of fruits such as plums, peaches, almonds and apricots. Although figures indicating the production of apricots are not recorded separately in the report relating to the amount of fruit production, figures indicating the considerable amount of exported dried apricots which are recorded in the report related to the trade of the Ostan, clearly shows the importance of this fruit in the economy of the region. In 1982, 3,734 tons of dried apricots were exported from East Azarbayejan Ostan mainly to East and West Germany, England, Kuwait and Belgium (Plan and Budget Organization of the East Azarbayejan Ostan, 1983, 110).

The main reason for the low productivity of agriculture may well be attributed to the primitive tools used. Furthermore, the problem of scattered plots and the distribution of holdings into small plots represents a barrier to the introduction of economic methods of agricultural production in East Azarbayejan as in other parts of the country (Institute for Economic Research, Tehran, 1968).

Animal breeding, particularly horse breeding is a very important aspect of East Azarbayejan's economy. In 1974, there were 754,292 cows, 73,846 buffaloes, 3,461,137 sheep, 881,881 goats in the Ostan. In addition, 45,534 horses and 276,634 pack animals were reared here (Plan and Budget Organization, 1979).

4.10 The effects of Land Reform on population movements in East Azarbayejan Ostan

Whereas the implementation of land reform has been suggested to be an effective policy in retarding the volume of rural-urban migration in many countries such as Bolivia (International Development Research Centre, 1977, 104), as shown earlier (see Chapter 3), the reverse was the case for Iran. In other words, the implementation of 1963 Land Reform programme in Iran supported an accelerating rate of out-migration from rural areas. Since East Azarbayejan was the first Ostan of Iran which experienced the implementation of the Land Reform programme the socio-economic and political implications of this programme were more conspicuous than in other Ostans. This section attempts to discuss the implementation of land reform and its effects on the social, economic and demographic characteristics of the Ostan. In addition to the most comprehensive research carried out by Lambton (1969) on the Iranian Land Reform, various sources will be used to show the socio-economic consequences of the implementation of land reform in East Azarbayejan Ostan. Indeed the implementation of land reform has brought about considerable changes in both rural and urban areas of the country. As Holliday (1979, 103) notes, the land reform was the chief means through which the state encouraged the capitalist transformation of the countryside. Although it was carried out under the slogan of "Land to the tiller" and thereby supposed to have an egalitarian character, the implementation of the reform was such as to create new social divisions in the countryside, in fact to create a capitalist class structure in place of the earlier pre-capitalist one.

In Iran the need for some kind of reform had long been recognized, and as early as 1906 there was open advocacy of re-distribution of landlord estates to the cultivating peasant during the Constitutional Movement of 1906-21.

In the post-1945 period, land reform became an established part of the policies of many political parties in the Middle East and, in the hands of the emergent revolutionary governments, had developed into a social, economic and political weapon . Land reforms of varying effectiveness were passed and implemented in Egypt in 1952, Syria and Iraq in 1958, with Turkey committed to a less radical but more carefully considered programme of agrarian reform from 1945 onwards. In consequence, the inequalities of landholding and corresponding maldistribution of income among rural classes in Iran were made to seem all the worse by comparison with the progress achieved in neighbouring countries. Through travel abroad, propaganda broadcasts from Egypt, Iraq and the U.S.S.R., and receipt of left-wing newspapers published outside Iran, students, intellectuals, and other politically conscious groups were informed of reform activity in other countries and of Iran's increasing agrarian backwardness relative to its close neighbours (McLachlan, 1968, 690).

Most discussion about the Iranian land reform is posed in terms of the specific conditions under which it was launched; most prominently, the crisis of the early 1960s, and the pressure of the Kennedy administration. This is all perfectly relevant, but it leads to a certain distortion, since judged by the narrow political concerns of that period the reform was a success. The Americans were pleased and the Shah emerged in a stronger position. The reform, and the defeat of the opposition in the 1960-63 period, marked a further step in the state's land reform process of consolidation. On the other hand, these historical factors are of limited help in assessing the importance of the land reform, since the land reform was an inevitability if Iran was to attempt capitalist development (Holliday, 1979, 104).

The influence of foreign advisers on the designation of the Iranian Land Reform Law during its passage through the assembly is discussed by McLachlan (1968, 690). According to him, Iran's allies in the West were especially concerned that weakness in agrarian structure would reduce the country's power to resist Communist penetration and possible social and political revolution.

According to Lambton (1969, 87) the Land Reform Law having been signed on 9 January 1962, it was announced that it would be put into operation first in Maragheh in East Azarbayejan. It should be mentioned here that as Holliday (1979, 109) has pointed out. the Shah was by no means the first person to call for land reform in Iran. The necessity for such reform had long been evident to many observers. The first Majlis, set up during the Constitutional Revolution, had not called for land reform since it had been dominated by landowners, but under the Gilan Republic of 1917-21 large estates in the areas held by the rebels were distributed among the peasants. A similar reform took place in Azarbayejan during the autonomous republic of 1945-6. According to Lambton (1969, 36), at the end of the Second World War, Soviet-inspired separatist movements developed in Azarbayejan and Kudestan, but collapsed after a brief period. In the former province the Democrat government under Pishavari expropriated the landlords, but failed to obtain any large measure of support from the peasants, partly because the dues formerly paid to the landlords were not demanded by the Democrat government. After the fall of the separatist movement in Azarbayejan and Kurdestan there was broadly speaking a reversion to the status quo ante in matters of land tenure and rural organization. The position of the landlords in Azarbayejan was, nevertheless, considerably shaken by this episode.

As stated earlier, the Land Reform Law of 1962 was first implemented

in the Maragheh region of Azarbayejan. Azarbayejan was chosen as the best region in which to begin operations, since it was predominantly a province of large landed proprietors and was also adjacent to Russian Azarbayejan, from whence came much of the Russian propaganda directed against the "feudal" landlord system of Iran generally and of Azarbayejan in particular. Also, the landlords in this area were less entrenched since they had been temporarily dispossessed during the Pishavari period, 1945-6, (McLachlan, 1968, 703).

Discussing reasons for the choice of Maragheh as the first place in which to put Land Reform Law into operation, Lambton (1969, 87) has noted that natural conditions in this part of Iran were favourable to agriculture, it contained both irrigated and unirrigated land. Irrigation was mainly by river and not by qanats. Droughts and crop failure were less frequent than in central Iran. Grain was the main crop, but cash crops were playing an increasingly important part in East Azarbayejan. Lambton added that Maragheh was one of the most fertile districts in the province and had a large export of locally-produced dried fruits and nuts. Under the former crop-sharing agreements in the Maragheh area the share going to the landowners was not unduly high. He took one-fifth on unirrigated grain and one-third or one-fourth on irrigated crops, or sometimes only one-fifth on these also.

The landowners in East Azarbayejan had, in general, used their position to keep the peasants in a position of subjection and backwardness. Economically, however, the peasants, although still poor, were better off in the area round Maragheh than in many parts of Iran. They were, on the whole, good husbandmen, competent and robust, and were likely to benefit immediately from the opportunities offered by land reform.

Describing the economic situation of the landowners of Maragheh, Lambton (1969, 88) noted that a high proportion of the landowners were absentees, living outside the region. Many of them were rich and enjoyed considerable incomes from their estates, but their influence was of an economic rather than a political nature. Their opposition to the land reform was, therefore likely to be less formidable than that of landowners in an area in which they still retained considerable political influence. In McLachlan's view, the value of the Maragheh experiment was threefold. In the first place, the time-period allowed Dr. Arsanjani (Minister of Agriculture in 1963) opportunity to concentrate his propaganda efforts against a small group of landlords while simultaneously utilizing all the material and human resources to support the relatively small number of peasant who were to take over landlord estates. Second, the project gave a chance for officials in the field to be trained for later leadership in other regions. Finally, during the Maragheh project, the hastily formulated and ill-defined legislation governing land reform was re-cast where necessary and made a more effective medium for use in field implementation of land reform (McLachlan, 1968, 703).

Except in the Maragheh area, where the land reform was implemented with vigour and speed, there was in the early days a certain scepticism among the landowners (and for that matter among the population as a whole) concerning the intention and ability of government to implement it. The land reform in Ardabil and Ahar started on 10 September 1962. Agriculture was not as highly developed in these areas as in Maragheh. Stock-raising played an important part in the local economy in Ardabil and Ahar (Lambton, 1969, 93).

Overall, under the first stage of the land reform (which lasted from January 1962 until September 1963) a total of 1,889 villages and 63 farms were purchased by the government from 8,059 landowners and

transferred to 128,884 peasants (the High Council of Planning of the East Azarbayejan Ostan, 1983, 165).

Among the 21 Ostans the greatest number of peasants to benefit from the first stage was in East Azarbayejan Ostan. And within the East Azarbayejan Ostan the greatest number of peasants to benefit from the first stage of land reform was in Tabriz Shahrestan (25,152 peasants), followed by Ardabil Shahrestan (19,307 peasants) and Mianeh Shahrestan (16,566 peasants) (The High Council of Planning of the East Azarbayejan Ostan, 1983, 164).

It should be mentioned here that, according to Land Reform Law of 1962, the maximum land area to be held in absolute ownership by one person was to be one village of six dang* or parts of various villages to a total of six dang. All landlords holding more than six dang were required to transfer ownership of their excess lands to the peasants working the area, or to sell these lands to the occupying peasants (McLachlan, 1968, 693).

In the second phase of land reform as indicated by Beaumont, Blake and Wagstaff (1976, 457-8) landlords were allowed to retain a maximum of 30 to 150 ha. of non-mechanized land, depending on the region. They were given three options, later increased to five, for dealing with the lands affected by the new laws. The three major options were as follows. First, they could rent the land to the farmers; Secondly, they could sell the land to the farmers by a mutually agreed contracts; or finally, they could divide the land amongst themselves and farmers in the same proportion as that in which the crops had previously been shared.

The second phase of the land reform in East Azarbayejan began in 1964 and a total of 3,429 villages and 273 farms (six dangs or less than six dangs) was distributed among 189,098 peasants. As in the

*Iranian villages are normally divided into six parts (dangs). The dang has no absolute areal value and varies from village to village depending on the amount of cultivated land each village has.

first phase, the greatest number of peasants to benefit from the second phase of the land reform was in Tabriz Shahrestan (33,167 peasants).

The third phase of the land reform in Azarbayejan began in 1968 and 3,216 villages and 270 farms in six dangs or less than six dangs were transferred to 188,722 peasants (The High Council of Planning of the East Azarbayejan Ostan, 1983, 168). Thus, by the end of 1971 a total of 506,704 peasants had received land under the three phases of the land reform. It should be noted that land was not distributed equally to all peasants. A considerable proportion of the rural population who had been the most deprived before the reform did not benefit from the distribution. This is because land was distributed according to the pre-existing system of village labour, i.e. to those who were more than casual labourers. The beneficiaries were the oxen-owners and the Nasagh-holders (see Chapters 3 and 7). Thus, the agricultural labourers and village proletariat, who had previously enjoyed no cultivating rights, were left out of the plan and, as Kazemi (1980, 259) has noted, the basic land reform law did nothing to improve the living conditions of the agricultural labourers. The agricultural labourers found themselves in a situation of growing destitution. Unemployment or underemployment became even more of a common feature in their lives. Hence, pressure to leave the rural areas for the cities - where, at least from a distance, subsistence life seemed possible - increased daily.

As Harrison (1983, 50) notes, the reform did not benefit the millions of rural families who were completely landless. It smashed the power of the feudal landlords, yet created another privileged class of small and medium landowners confronting an underprivileged and underemployed mass of labourers.

To be effective, land reform must radically reduce rural inequalities, eliminating not only the very large landlords, but also the excess holdings of richer middle peasants. It must benefit all major categories of rural poor, and in particular it should give land to the landless. An effective land reform must benefit all the rural poor, including the landless and the owners of parcels too small to survive on (Harrison, 1983, 62).

One of the most common criticisms of land reform programmes is that they have been known to lead to a fall in production. This was true in the case of the Iranian land reform.

Discussing the major reasons for the fall of agricultural production after land reform in Iran, Aroian and Mitchell (1984, 281) have concluded that the peasants who received land rarely received enough to benefit fully from redistribution. Those whose holdings were insufficient generally became more impoverished because they had no means of investing in equipment or other technological improvements that might have increased their harvest. Many had to borrow money at high interest rates to make ends meet. Rural cooperatives set up as part of the land reform programme also failed to meet borrowing needs. Therefore, those peasants who could not retain what they had been given because of inability to pay their debts were added to the estimated 50 per cent of the peasantry who had received no lands at the outset. Others kept their lands only through extra work. Instead of making the peasantry independent, then, reform perpetuated dependency and fuelled rural-urban migration of landless and poor peasants. Furthermore, two major failures in agriculture were the government's agricultural corporations and large agribusiness of the 1970s. Productivity in the corporations did not reach the anticipated yields, partly because peasants did not feel they had a genuine stake in the system. Agribusiness proved even

less successful despite the fact that land seized for use was well-watered, located below dams and was leased at favourable prices. Thus, the establishment of agribusiness created the problem of rural unemployment and decline of agricultural production which may be considered as the reason for rural-urban migration. In the case of landowners, the promise of large and quick profits to be made in the towns, the attraction of government services, and the promise it offered of security and status, were powerful inducement.

Examining socio-economic effects of land reform, Lambton (1969, 110) has noted that, in the economic field, the achievements were not so marked. The foundations had been laid for the emergence of a self-reliant and independent peasantry but this could not be achieved without a rise in living standards. As discussed by Keddie (1981, 168), land reform may never have had primarily economic goals; a major aim was to cut landlord power and bring peasants and nomads under direct government control, and this was accomplished. But, as Lieberman (1979, 302) has indicated, the economic impact of the reform seems to have been unfavourable; production was disrupted as some of the best lands were divided into smallholdings, and agricultural investment may have fallen in the 1960s. In fact, the economic aims of the reform were never specified; government agencies and departments never agreed on a "target model" of agricultural organization to replace the village system; and no full-scale effort was made to follow up and consolidate the reform.

As stated earlier, in the political field, the power of landowners had been virtually broken. There were, it is true, to be further attempts at overthrowing the reform, but these were to fail. Discussing the political impact of the reform on rural population, Halliday (1979, 136) notes that there can be little doubt that the removal

of landlord power in the villages was very popular, and that those peasants who received land were pleased to do so. At the same time, the initial hopes that everyone would get land were disappointed, and it is therefore quite plausible that discontent among the landless 50 per cent was prevalent.

In Tapper's view, the major effects of land reform in Azarbayejan have been political and ideological. The power of the landowners has been broken, and the peasants freed from a considerable burden of oppression, are now moved by a spirit of independence and self-reliance to take steps to better their own conditions (Tapper, 1979, 35). Overall, in the social field, the element of subjection in the relations between landlord and peasants had been destroyed in districts where the land reform had been carried out and elsewhere greatly lessened (Lambton, 1969, 110).

It should be added here that the Literacy Corps,* which was established after the referendum of 1963, to a considerable extent affected the rural areas in terms of the rate of literacy and the increase in the rate of literacy led to further migration from the countryside. As Kazemi (1980, 66) has pointed out, a more plausible explanation contributing to cityward migration is the increase in the degree of education in the countryside. Thus, it is likely that the current steady expansion in rural literacy will result in an increase in the rates of cityward migration among peasants. Furthermore, as Hemmasi (1974, 95) has pointed out, the level of an individual's education affects not only his awareness of other regions, but also his outlook with regard to cultural differences and the importance of tradition. Thus, the expansion of urban areas of the East Azarbayejan

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* Holders of secondary school diplomas and university graduates when called up for military service were drafted into a Literacy Corps, the members of which were sent to start schools in villages where none existed.

Ostan and the increase in the population of the major cities particularly Tabriz, the Ostan's capital, after the land reform, to a great extent may be attributed to rural-urban migration (see Chapters 6 and 7). Finally it should be added that migrants from rural areas of East Azarbayejan Ostan have not only contributed to the increase in the population of the major cities of the Ostan but also to a considerable measure are responsible for the increase in the population of the capital city of Tehran (see Chapter 2).

4.11 Settlement Patterns

Despite a number of substantial handicaps, which in addition to water salinity also include a difficult topography, heat and cold, and a disturbed political background, human settlement in Azarbayejan is more extensive than in many other parts of Iran. With an overall population density of 47.6 per sq.km. (national average 22.8 per sq. km.) Azarbayejan ranks as one of the most densely peopled areas of the country. Great altitude in certain parts results in a distinctly higher rainfall and this, together with the recent phases of vulcanicity, has given rise to a somewhat deeper and more fertile soil in a number of localities. Hence at lower levels, where there is shelter from the bitter winter winds and soil has accumulated as small deltas or flats, cultivation occurs on a scale greater than in many other parts of Iran - the Caspian lowlands excepted. At higher altitudes, on the plateau surface, the climate is often too cold and water too scanty (because of percolation into a porous substratum) to produce anything more than a thin vegetational cover of short grass and low scrub, which is frequently broken by expanses of bare rocks (Fisher, 1968,p.12).

Two somewhat different ways of life have thus come into existence in this region: pastoralism in the higher parts, and cultivation, mostly of a settled kind, in the more favoured, lower-lying areas. Sheep and goats, with some cattle and a few horses or even camels are reared by herders, who tend for the most part to

be sedentary and have some attachment, at least for a portion of the year, to cultivated areas at lower levels. But nomadism still exists in the Moghan steppe zone of the north-east of Azarbayejan. It is an interesting reflection of the significance of pastoralism in north-west Iran that the Qara Qoyunlu (black sheep) Turkmen, who ruled Iran during the fifteenth century, made Tabriz their national capital.

The Shahsevan of Azarbayejan are pastoralists with farming interests and are involved in a cycle of spring and autumn migration. In recent decades they have been brought under effective administrative control by the central government whose institutions have increasingly taken care of law and order among them. This has had a dramatic effect on their political and economic organization. The territory inhabited by Shahsevan in East Azarbayejan is bounded by the frontiers of Soviet Azarbayejan in the north and east, and the mountain ranges of Baghrow, Bozgush and Qara Dagh in the south and west (Tapper, 1979, p.23).

In this habitat the Shahsevan are more fortunate than most pastoral nomads in Iran. With a transhumance of little more than 150 km. they can move between summer pastures at heights of up to 4,000 m. and winter quarters near sea-level in Moghan, thus gaining maximum protection against seasonal variation in climate. The Shahsevan nomads number about 40,000 and are primarily based on the Meshkinshahr and Moghan Shahrestans. In summer, although many of them move into the territory of one of the other neighbouring Shahrestans (while a few nomads from Arasbaran enter Meshkinshahr territory), the majority of them remain under the jurisdiction of the Meshkinshahr and Moghan authorities.

Except the Shahsevan nomads of the Moghan region, who form 1.25 per cent of East Azarbayejan's total population, the inhabitants of other parts of the Ostan are all settled.

In 1976 there were 580,065 households in the Ostan, of which 579,877 households were private and the remaining (188) were collective households. Of the total population of the Ostan, 2,009,393 or 62.8 per cent were living in rural areas, and 1,188,292 or 37.2 per cent in urban areas. The urban population of the Ostan was distributed between 33 cities and towns of its eleven Shahrestans. The population of these cities and towns varied from 5,000 to more than 500,000. Urban areas accounted for 225,992 or 38.9 per cent of the Ostan's households with the mean number of 5.2 persons, and rural areas contained 354,073 or 61.1 per cent of the total households of the Ostan, including tribal households with the mean number of 5.7 persons. More than 60.0 per cent of the total urban population of the Ostan which accounted for 140,357 or 62.1 per cent of the Ostan's urban households, was concentrated in 15 cities of Tabriz Shahrestan, including Tabriz City, the Ostan's capital with a population of 597,976. Seven out of eleven Shahrestans had one town each, with a population of 5,000 or more. Maragheh and Marand Shahrestans had four such cities each, and Moghan contained three urban places.

Although there has been a significant increase in the number and population of urban places in East Azarbayejan, mainly as a result of rural-urban migration in recent years, more than 62.0 per cent of the Ostan's inhabitants were reported as rural in 1976. Rural inhabitants of the Ostan are distributed between 4,503 villages throughout the Ostan, the populations of these villages varied from less than 50 up to 5,000. In 1976, there were 4,576

villages in East Azarbayejan, of which 73 were reported to be uninhabited, mostly due to the migration of villagers to cities and urban places of the Ostan. A large number of villages are located in mountainous regions (80.0 per cent). Villages tend to cluster near water-courses, where a few willow, poplar or walnut trees dominate the smaller, but more numerous fruit trees and orchards. Villages located in the plains and lowlands of the Ostan numbered 955 (less than 20.0 per cent of the Ostan's total). Ahar Shahrestan, with 986 villages, had the largest number of villages, and the number of villages among the remaining ten Shahrestans varied from 149 in Sarab to 564 in Hashtrud.

In 1976 the population density of the Ostan was 47.6 persons per sq.km. Among the eleven Shahrestans of the Ostan, Tabriz with 91 persons per sq.km. had the highest population density and Ahar with 24.3, the lowest. Table 4.6 shows the Ostan's area, total, rural and urban population and population density, as well as the number of cities and villages by Shahrestan in 1976. It is important to note here that contradictory figures for the number of villages in the East Azarbayejan Ostan are due partly to the lack of a clear definition of a village and partly to the boundary changes through which a number of villages were separated from peripheral Shahrestans and attached to the adjacent Ostans.

According to the definition of the Statistical Centre of Iran, all Shahrestan centres, regardless of size, and all places with a population of 5,000 or more were considered "urban" and the rest as "rural" areas. Rural places located outside the boundaries of cities and containing less than 5,000 inhabitants are termed Abady (inhabited place in rural areas) and are divided into the following five groups:

1. Village : refers to a place composed of a group of farms, orchards, residential and non-residental places, either attached or separated from each other, usually with a village headman,

(kadkhoda), but sometimes administered by the village headman of an adjacent village. The village boundaries have been determined by reference to the registered limits or through making inquiries from well-informed people of the village.

2. Dependent farm : refers to a place located outside the village's registered limits. It is known by another name, and some agricultural activities take place there, but from an administrative point of view it is dependent on a village. For such farms a separate village questionnaire was completed.

3. Dependent place : refers to a place located outside the village's registered limits and where some non-agricultural activities (such as a mine, factory, roadside tea-shop, etc.) are going on. From an administrative point of view it is dependent on a village. For such places, as stated above, a separate questionnaire for inhabited places has been completed. Mines or factories located within the village limits are included in the enumeration of that village.

4. Independent farm : refers to a place that is established for agricultural purposes outside the registered limits of the village and situated in a place that does not depend on any village for administration.

5. Independent place : in addition to the villages, or inhabited places, mentioned above, there are other scattered places outside the registered limits of the villages in which some non-agricultural activities such as mines, factories, roadside tea-shops, etc., exist. As such places were not dependent on any village, a separate questionnaire for each was completed.

Table 4.6 : East Azarbayejan, Area, Total, Urban, Rural Population., Population Density and Number of Cities and Villages by Shahrestan, 1976

Shahrestan	Area(sq. km)	Total Population	Urban Population	Rural Population	Population Density (per sq. km)	No. of Urban places	No. of Villages
Tabriz	11,801	1,073,912	715,478	358,434	91.0	15	481
Maragheh	5,388	309,321	121,563	187,758	57.4	4	325
Ardabil	4,861	370,599	147,865	222,734	76.2	1	389
Ahar	12,197	296,997	32,098	264,899	24.3	1	986
Mianeh	4,624	200,233	36,164	164,069	43.3	1	304
Khalkhal	5,512	157,171	9,705	147,466	28.5	1	471
Meshkinshahr	3,490	127,391	14,568	112,823	30.5	1	288
Marand	4,640	189,919	62,158	127,761	40.5	4	167
Sarab	2,866	122,532	18,361	104,171	42.7	1	149
Hashtrud	6,241	175,338	6,875	168,463	28.1	1	564
Moghan	5,484	174,272	23,457	150,815	31.8	3	547
Total	67,104	3,197,685	1,188,292	2,009,393	47.6	33	4,576

Source : Village Gazetteer of East Azarbayejan Ostan based on the 1976 National Census of Population and Housing.

As can be seen from the above classification, the term Abady (inhabited place in rural areas) has a broad meaning and includes villages, dependent and independent farms and places in rural areas. However, in this study, as in many other studies carried out by governmental institutions and organizations, the term village refers to all inhabited places with less than 5,000 inhabitants in rural areas.

It should be noted that, according to the High Planning Council of East Azarbayejan Ostan(1983,107) there were 4,362 villages as classified in group (i) above by the Statistical Centre of Iran in 1980 in East Azarbayejan Ostan.

It is interesting to note that according to the Plan and Budget Organization of the Ostan (1983, 45) the villages (all places with less than 5,000 inhabitants in rural areas) of the Ostan numbered 5,038, of which 535 were uninhabited while, as stated earlier, according to the Village Gazetteer of Iran (1980, Vol.9, p.5) of 4,576 villages of the Ostan only 73 were reported to be uninhabited.

Thus data on the number of villages differ from one official source to another. As a typical example this shows the extent to which a researcher in Iran and other Third World countries is faced with the problem of the availability, accuracy and reliability of the information presented in various official sources and governmental publications.

4.12 Industry

East Azarbayejan Ostan, besides being one of the most important agricultural areas in the country, has for long had some industrial and commercial significance. Leather manufacturing, match-making, numerous carpet-weaving and other factories have been operating in the major cities of the Ostan, especially in Tabriz for several decades. Also its commerce and trade operations have been very important due to its location between the capital and Europe. Due to the export of carpets, Tabriz, the Ostan's capital had for some time been the trade metropolis of Iran, and this was reinforced by the early

construction of roads. During the last 20 years a number of modern industrial and manufacturing centres and complexes have been established, which have attracted a large number of migrants from all over the Ostan, especially from rural areas to Tabriz (Ostan's capital), thus affecting the pattern of population distribution in the Ostan.

In this section, after discussing the manufacturing industries in East Azarbayejan, modern manufacturing factories which have been established in Tabriz during the last two decades will also be discussed very briefly.

In 1969 East Azarbayejan Ostan accounted for 16.5 per cent of large manufacturing * establishments in Iran. The food industry accounted for 17.4 per cent of the total number of establishments in the Ostan, while textiles, carpets and gelims constituted the largest share(61.4 per cent). Construction accounted for 5.5 per cent, clothing, metal products, chemicals and others altogether accounted for 14.7 per cent of manufacturing establishments of Ostan.

The food industry was mainly concerned with dried fruit and bakeries. Dried fruit establishments, employing between ten and sixteen persons on average, were concentrated in Osko, Maragheh, and to some extent in Tabriz and Azarshahr. Bakeries employing between ten and eleven persons, on average, were situated in Tabriz City itself. Flour mills, however, were distributed between Tabriz, Sarab, Ardabil and Marand but they were only few in number.

Textiles: carpet weaving establishments constituted the major share (more than 75.0 per cent of the textile establishments) employing approximately 15 to 30 persons. They were mainly

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* Iranian authorities have categorised manufacturing industries into large and small establishments. "Large" refers to establishments employing more than ten persons, and "Small" means establishments employing less than ten persons.

concentrated in Tabriz and Ardabil in the first place, other towns such as Marand, Maragheh, and Azarshahr also had a few establishments each. In the rural areas, other carpet weaving centres of less importance than that of Tabriz, were in the Heris, Gharacheh, and Sarab district, where nearly 70 villages were engaged in carpet weaving.

Clothes manufacturing: clothes manufacturing, consisting of knitting, socks, tailoring and shoes, was carried out in establishments employing between ten and twenty persons and located exclusively in Tabriz. Leather and skins processing employing thirteen to forty persons on average were also found mainly in Tabriz.

The construction sector, consisting of a large number of brickworks and mosaic tiles, employing between ten and thirteen on average was also concentrated in Tabriz. Other industries such as metal works, chemicals and modern manufacturing such as television assembly plant, were also in Tabriz (Radji, 1974, pp.82,83).

The pattern that emerges, therefore, is the overwhelming concentration of large establishments in Tabriz and to a lesser extent in Ardabil and Maragheh, reflecting the importance of Tabriz as a regional centre, both in terms of concentration of people and wealth. Moreover, as stated earlier, during the last two decades many modern manufacturing concerns have been established in Tabriz. As a result, in recent years Tabriz City has become a favourable destination for a large number of migrants from the rural areas as well as the small towns of the Ostan.. These modern industrial establishments are shown in Table 4.7.

Table 4.7 : General Characteristics of the 8 Modern Industrial Establishments in Tabriz

Name of Industrial Establishment	Location	Year of Establishment	No. of Staff	Type of Products
1. Tabriz Machin Manufacturing Factory	West	1972	2,330	Machinery items
2. The Iranian Tractor Manufacturing Factory	West	1970	710	Tractors
3. The Iranian Diesel Engine Manufacturing Company (IDEM)	West	1970	550	Diesel engines
4. The Iranian Dorman Diesel Factory	West	1973	102	Diesel engines
5. The Ballbearing Manufacturing Factory	West	1971	189	Ballbearings
6. The Leyland Diesel Engine Manufacturing Factory	West	1970	365	Diesel engines
7. The Sufian Cement Factory	32 km. to the West		227	Cement
8. Tabriz Refinery	West	1977	600	Oil

Source : Assayesh, H. (1977) Azarbayejan : Past and Present,(Farsi), Tabriz University Publication, Serial No.222.

In 1966, of the total employed population of East Azarbayejan 50.2 per cent were active in the agricultural sector (farming, hunting, forestry and fishing), 28.6 per cent in the industrial sector (mining, quarrying, manufacturing, construction, electricity, gas and water); 21.2 per cent in services (sales, hotel management, restaurant, and cafe ownership, transportation and warehouse keeping, communications, transmissions, financial and insurance services, real estate and business, social and personal services).

In 1976, the distribution of the active population in the above mentioned three sectors was 37.8, 38.7, and 23.5 respectively. Thus there has been a considerable increase in percentage of population active in the industrial sector (10.1 per cent increase in the period between 1966 and 1976). By contrast, population active in the agricultural sector decreased by 12.4 per cent in the same period.

Although a remarkable increase of population active in the industrial sector and the establishment of various industrial and manufacturing centres, has made East Azarbayejan one of the most important industrial Ostans in Iran in recent years, many economic and social problems will be inevitable in the future if the development of the agricultural sector of the economy is ignored.

4.121 Communications

Notwithstanding its mountainous character, East Azarbayejan is favoured by its situation between the capital and Europe. Besides containing a number of ancient east-west routes linking the Aegean, Asia Minor, central Asia and India, the region is now on principal lines of communication between Iran and the Soviet Union. In consequence, there have been for some time considerable external trading interests and local products of the region - wool, leather,

and dried fruits - have found commercial outlets in other countries. This nodal position where the more ancient east-west routes intersect the newer north-south lines (now of growing significance), explains why Tabriz has at several periods functioned as the capital of a wide territory, which has sometimes included not only the whole of Iran but even lands beyond. International trade, as well as fundamental strategic importance, has added important extra elements to its two basic economic activities of herding and cultivation (Fisher, 1968, pp.13, 14).

East Azarbayejan has a particular advantage from the viewpoint of communication facilities. It can utilize land, air and water routes for this purpose. The oldest Iranian railway line was built in this Ostan. It is noteworthy that Tabriz, Ostan's capital, was linked to Russia by the eighty-two mile extension of the Russian system through Tiflis and Julfa long before Tehran had a major railway. Thus it can be said that East Azarbayejan is the first region in the country to be connected to the European railway lines through the U.S.S.R. railway. Railway lines have a crucial role in connecting this Ostan, both to Europe (through Turkey) and to all other parts of the country. In the air, Tabriz airport connects this Ostan to Tehran and thereby to other cities of the country, as well as to different parts of the world. Water routes of Urumiyeh Lake connect the Ostan to West Azarbayejan. On land a first-class asphalt road connects Tehran to the European highway networks passing through Tabriz and Bazorgan to Turkey. Although roads and railway lines connect the major cities of the region to the Ostan's capital as well as to the other parts of the country, until recently communication throughout the rural areas were poor and confined to a few well-worn routes. Villages were isolated

and inward-looking. The houses were never scattered among the fields, but rather were clustered together, often within a wall which, though now crumbling, once gave some protection against nomad raids (Tapper, 1979).

Since the establishment of comparative security in Azarbayejan half a century ago, communications have gradually improved in the rural areas, mobility has increased and villages have become less isolated. By the 1960s loose-surfaced roads permitted bus and truck traffic in most weathers.

In 1976, there were 903 km. of asphalt and 1,510 km. of gravel roads connecting rural settlements to urban places. According to the 1974 agricultural census of Iran, of the 4,944 villages in the East Azarbayejan Ostan, 1,157 were connected through mule tracks to the main urban places, 3,362 were using loose-surfaced roads, 287 were served with gravel road, while only 94 villages had asphalt roads for their transportation. Railway facilities were found in only 38 villages, while another 6 situated on the eastern bank of Urumiyeh Lake were using water routes (Plan and Budget Organization,1979).

In 1976 there were 502 km. railway lines in this Ostan as follows :

Mianeh	-	Maragheh	168 km.
Maragheh	-	Tabriz	128 km.
Tabriz	-	Julfa	154 km.
Sufian	-	Sharafkhaneh	52 km.

4.12.2 Telecommunications

Telecommunication facilities connect all the Shahrestan centres to each other and to the Ostan's capital as well as to other Ostans on the one hand and to Tehran, and thereby to various parts of the world, on the other hand. It must also be mentioned that in recent years some major towns in the Ostan have been brought under the microwave telecommunication facilities enabling them to enjoy direct telephone contact to most parts of the world.

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CHAPTER 5

THE POPULATION OF EAST AZARBAYEJAN

5.1 Introduction

In order to provide a general background for the study of inter-Shahrestan migration in East Azarbayejan, it is important to identify the demographic, social and economic characteristics of the Ostan. Therefore, in this section an attempt is made to give a comprehensive picture of the distribution, age and sex structure, and economic structure of the population of East Azarbayejan. Furthermore, in order to show the trends of urbanization, variations between rural and urban population increases based on the 1956, 1966 and 1976 census will be examined. In addition, the growth of the towns and cities of the Ostan, which to a great extent is supported by industrialization and rural-urban migration, will be discussed.

It is worthwhile to note that the role of industrialization in the growth of towns and cities has been an important topic of discussion in the studies dealing with the phenomenon of urbanization in recent years.

Discussing the causes of urbanization Butler and Crooke (1973, 18) have noted that in modern times it seems clear that urbanization is the product of industrialization but this was not always the case. Furthermore, Trewartha (1972, 150) has indicated that urbanization is a cyclical process through which nations pass as they evolve from agrarian to industrial societies implying a direct positive correlation between the degree of industrialization and urbanization.

Examining the effects of "industrial revolution" on the growth

of urban settlements in western Europe and North America Hay (1979,83) has pointed out that it is specious to say that industrialization caused urbanization or vice versa. He has added that, both were manifestation of a model change in social organization of production - a change from "simple" or "primitive" accumulation to the expanded reproduction of industrial capitalism. He concludes that to isolate specific "causes" and "effects" is impossible.

5.1.1 Administrative Divisions of the Ostan

For the purpose of the first census (1956, East Azarbayejan Ostan, one of the thirteen Ostans of the country, was divided into 11 Shahrestans (Fig.5.1). *In the 1966 census, Shahindezh census* district and some parts of Maragheh and Ardabil census districts were detached from the East Azarbayejan Ostan and added to West Azarbayejan and Gilan Ostans. Thus the administrative divisions of East Azarbayejan in 1956 were not the same as in 1966. Because of these changes in administrative boundaries, it is difficult to make comparisons between the two censuses. However, a few comparisons have been made at Shahrestan level, where data are comparable.

In 1966, East Azarbayejan was divided into 10 Shahrestans (Figure 5.2). At the time of the 1976 census Meshkinshahr Shahrestan was divided into two Shahrestans and Moghan district which had been part of Meshkinshahr in 1966, appeared as a new Shahrestan of the Ostan. Thus, in 1976, East Azarbayejan Ostan consisted of 11 Shahrestans (Figure 5.3). In this study, in order to make the 1976 census results comparable with those of 1966, Moghan Shahrestan will be considered as part of Meshkinshah Shahrestan, as in 1966.

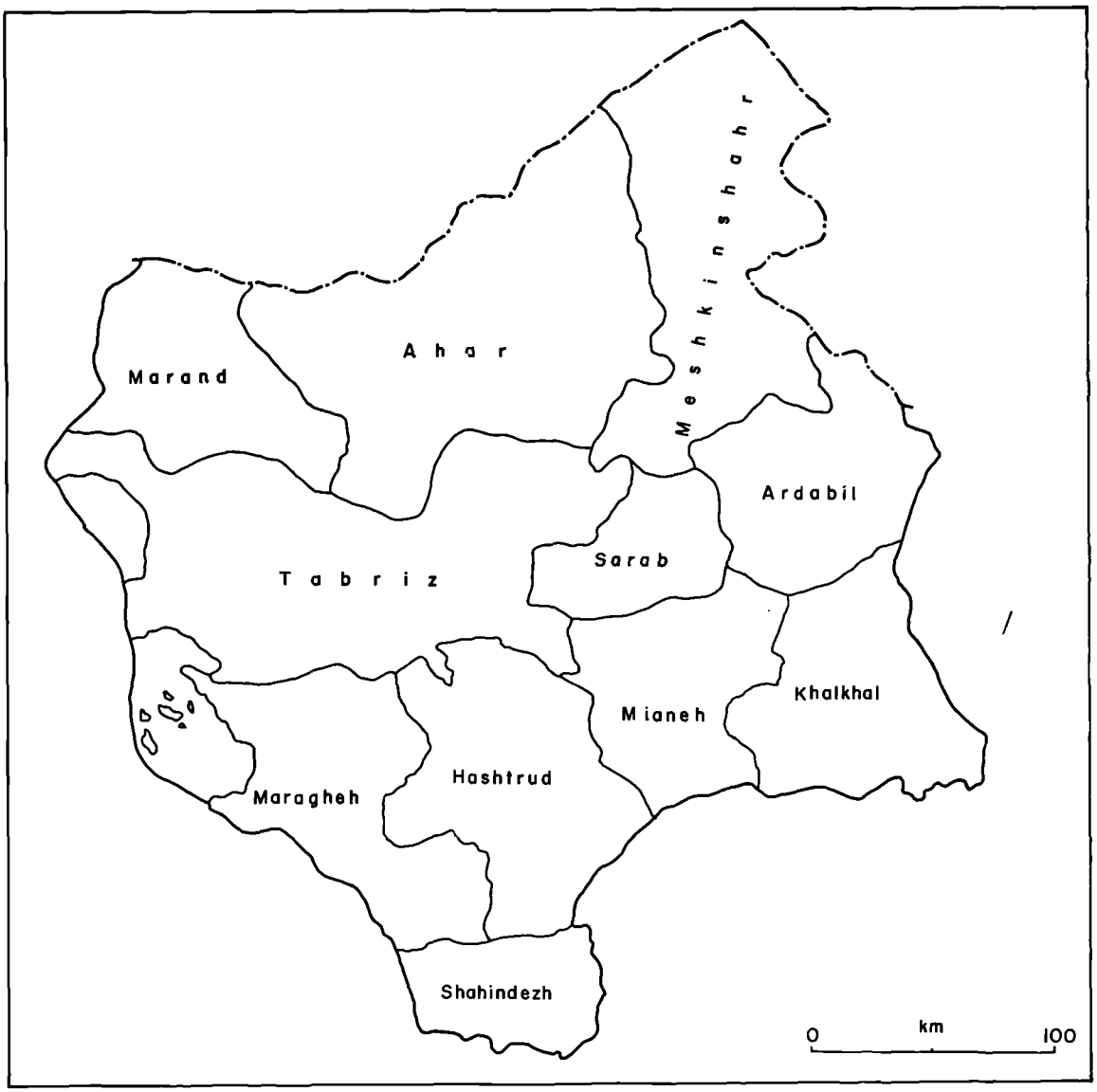

Figure 5.1 East Azarbayejan : Administrative divisions by Shahrestan, 1956.

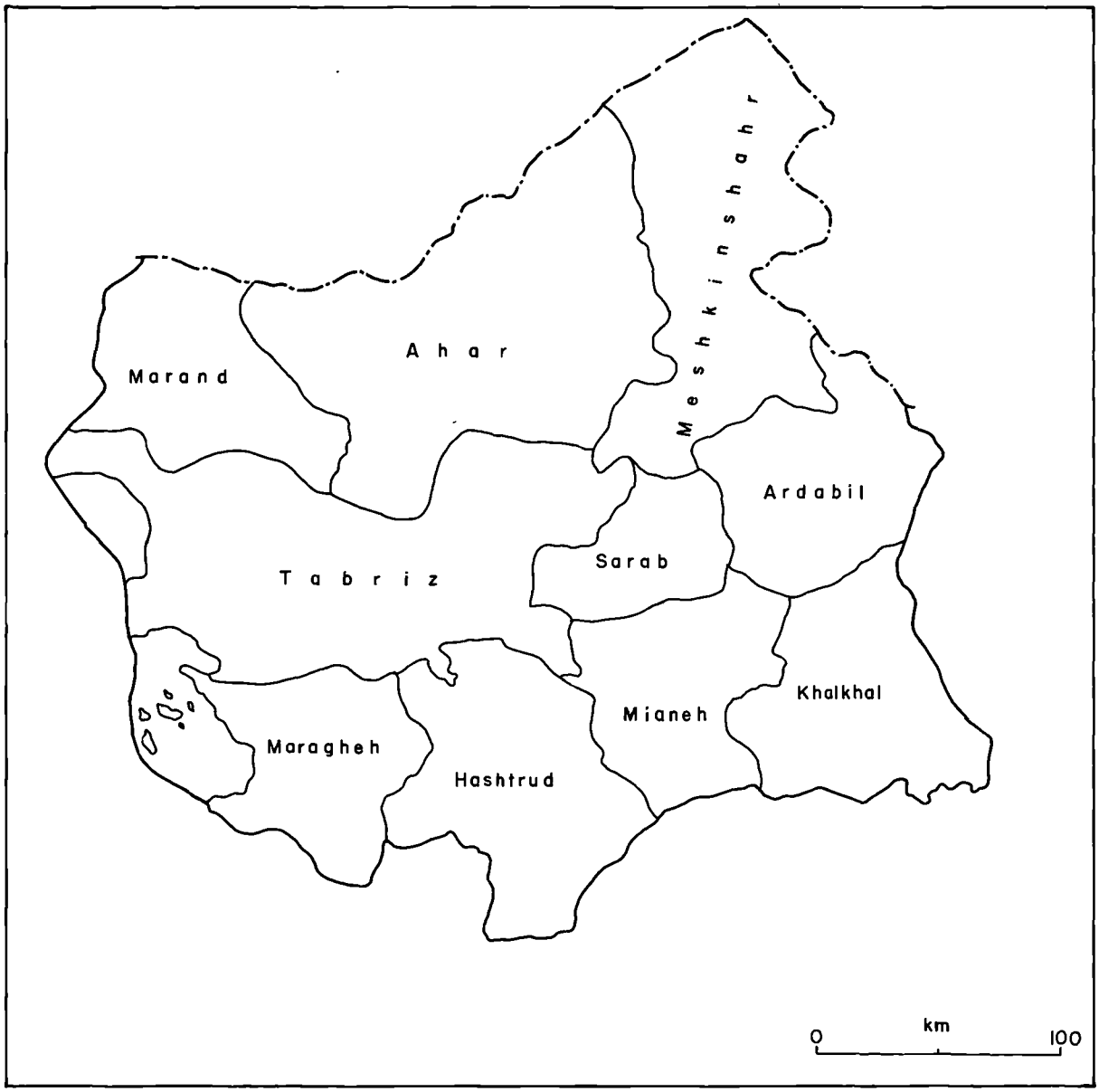

Figure 5.2 East Azarbayejan : Administrative divisions by Shahrestan, 1966.

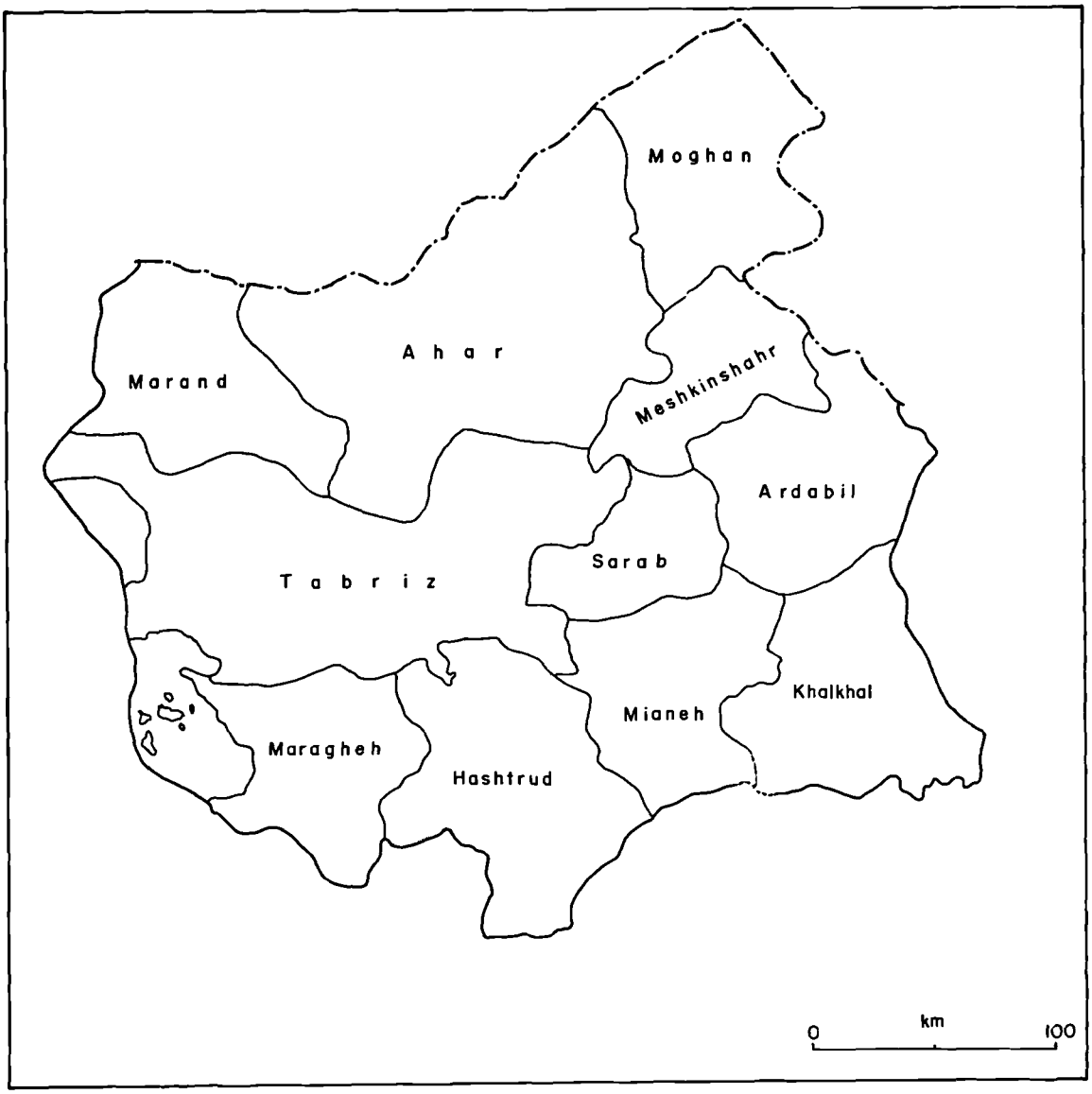

Figure 5.3 East Azarbayejan : Administrative divisions by Shahrestan, 1976.

5.2 Population and households

According to the 1956 census, of the total population of 2,142,270 in East Azarbayejan Ostan, 1,597,922 were rural members of 319, 424 households and 544,348 urban in 108,140 households. The mean number of members living in a household for both rural and urban areas was 5.0.

The total population of the East Azarbayejan Ostan as enumerated in the 1966 census was 6,606,314 of which 2,596,439 were settled and the remaining 9,875 were unsettled, that is, without a fixed residence. A total of 2,582,516 persons were enumerated as members of the 486,188 private households. There were 21 collective households with a total of 13,923 members. The mean number of persons per private household for the Ostan as a whole was 5.3.

In 1976, the total population of the Ostan was 3,197,685, of which 3,159,353 were settled, 100 mobile and 12,049 were tribal. A total of 3,171,512 persons were enumerated as members of 579,877 private households and 26,173 as members of 188 collective households in 1976.* The mean number of members living in each private household was 5.5.

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* Persons who shared a common objective or reason for living together (for example, military service, education, mental illness, etc.) in an institution or an organization with established regulations (barracks, dormitory, asylum etc.).

According to the 1966 census, in the urban areas 742,577 persons were enumerated in 143,543 private households. In the rural areas 1,839,939 persons were enumerated in 342,645 private households. The mean number of persons per private household was 5.2 in the urban and 5.4 in the rural areas. In 1976, of the total population 1,188,292 were urban members of 225,907 households and 2,009,393 rural in 353,970 households. The mean number of members living in a private household was 5.2 for urban and 5.7 for rural areas.

Examination of the mean number of members of households in the last three censuses reveals that there has been an increase in the average size of households in a period of 20 years (1956-1976), and that the size of households in rural areas appeared to be larger than that of the urban areas. This can be explained by the fact that, as more families move to urban areas, the tendency for grandparents, children and grandchildren to all reside in the same household is lessening, while in rural areas the "extended family" remains a common phenomenon.

5.3 Population distribution and density

As Table 5.1 shows, there were massive differences in the size and density of populations between Shahrestans. In 1976, Tabriz Shahrestan with an area of 11,801 sq. km. (17.6 per cent of the total area) accounted for one third of the Ostan's population, while Ahar Shahrestan with 12,197 sq. km. (18.2 per cent of the total area) contained less than 10.0 per cent of the Ostan's total. Among the 10 Shahrestans, Sarab had the lowest percentage of Ostan's population. Water, soil and topography are clearly the dominant factors influencing the distribution and density of the Ostan's rural population, but

Table 5.1 : Population Distribution and Density in East Azarbayejan by Shahrestan, 1976

Shahrestan	Area		Population		Urban	Density per sq.km.	
	sq.km.	%	No.	%	%	Tot. Pop.	Rur. Pop.
Tabriz	11,801	17.6	1,073,912	33.6	66.6	91.0	30.4
Ardabil	4,861	7.2	370,599	11.6	39.9	76.3	45.8
Ahar	12.197	18.2	296,997	9.3	10.8	24.3	21.7
Maragheh	5.388	8.0	309,321	9.7	39.3	57.4	34.8
Meshkinshahr	8,974	13.4	301,663	9.4	12.6	33.6	29.4
Mianeh	4,624	6.9	200,233	6.3	18.1	43.3	35.3
Hashtrud	6,241	9.3	175,338	5.5	4.0	28.0	27.0
Marand	4,640	6.9	189,919	5.9	32.7	40.9	27.5
Khalkhal	5,512	8.2	157,171	4.9	6.2	28.5	26.7
Sarab	2,866	4.3	122,532	3.8	15.0	42.7	36.3
Total	67,104	100.0	3,197,685	100.0	37.2	47.6	29.9

Source: Third National Census of Population and Housing, 1976, Vols.31-41.

the distribution of the population as a whole is strongly influenced by the increasing dominance of Tabriz as the metropolitan centre of the Ostan. The population density of the Ostan was 47.6 persons per sq. km. in 1976, as compared with a density of 38.8 in 1966. As can be seen from Table 5.1, population densities varied from 24.3 persons per sq. km. in Ahar Shahrestan to 91.0 in Tabriz (Figure 5.4).

5.4 Population growth, 1956-1976

As Table 5.2 indicates, the total population of the East Azarbayejan Ostan increased by 523,146 (25.1 per cent) between 1956 and 1966, with an annual average rate of 22.6 per 1000. The increase between 1966 and 1976 was lower by 2.4 per cent than in the preceding decade and the rate of increase in the Ostan was well below the national average, as had been the case between 1956 and 1966. This was due mainly to the heavy out-migration from Ostan. As Table 5.3 shows, there were notable differences between urban and rural areas in the rate of population increase. Whereas the urban population of the Ostan increased by 432,834 or 57.3 per cent between 1966 and 1976, rural population increased by only 8.6 per cent in the same period. This shows that, despite the relatively high fertility rate in rural areas, rural population growth was relatively slow. This was due mainly to rural-urban migration, but an increase in the number of urban places also had some effect. As will be discussed later, urban places, that is towns with more than 5,000 inhabitants, increased from 20 in 1966 to 34 in 1976.

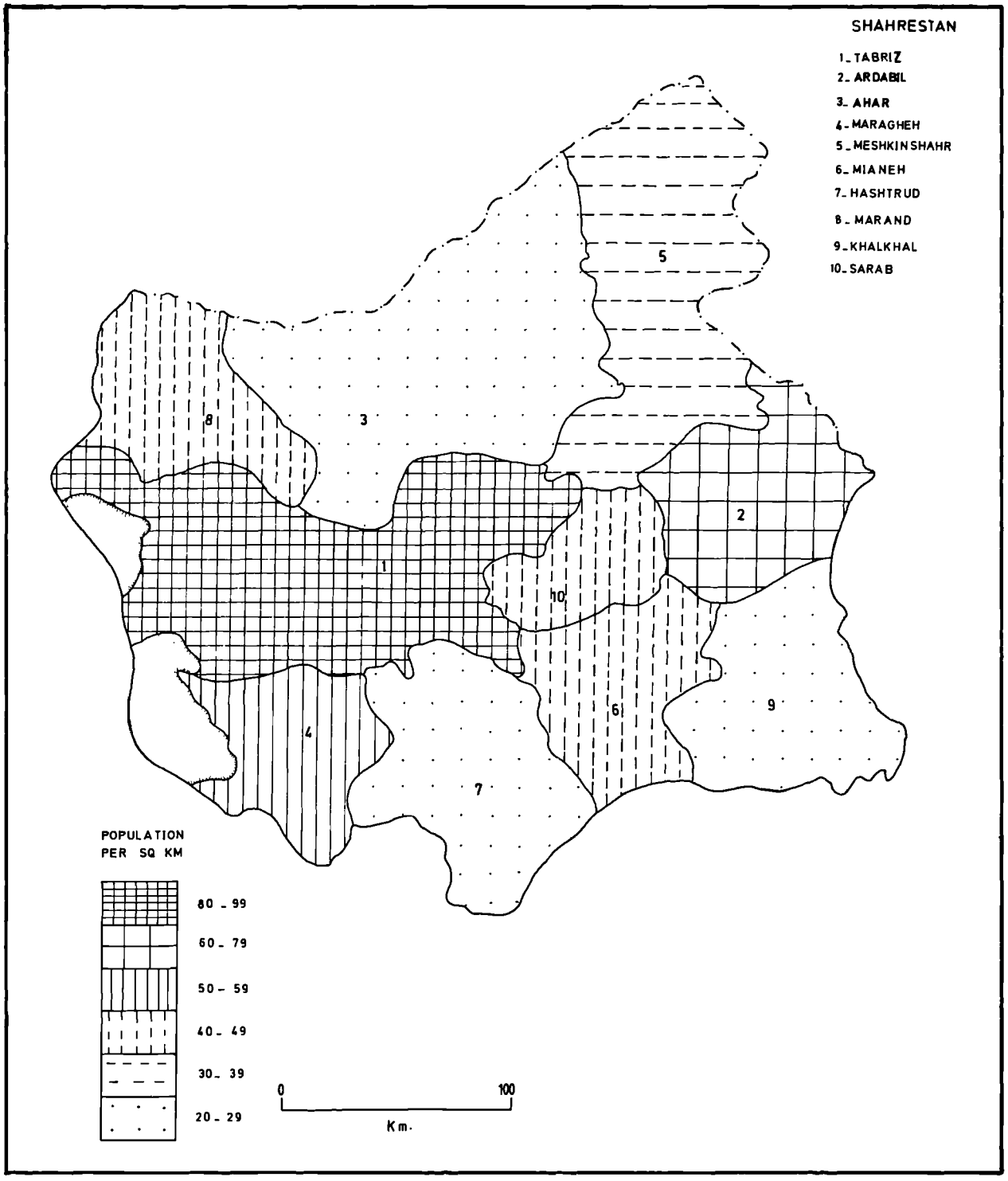

Figure 5.4 East Azarbayejan : Population density, 1976.

Table 5.2 : Population Growth in East Azarbayejan and Iran,1956-1976

EAST AZARBAYEJAN

Year	Population	1956 - 76 Population growth		
		No.	%	Annual average,per 1000
1956	2,083,168*	-		
1966	2,606,314	523,146	25.1	22.6
1976	3,197,685	591,371	22.7	20.6
IRAN				
1956	18,945,704			
1966	25,788,722	6,843,018	36.1	31.3
1976	33,708,744	7,920,022	30.7	27.1

* Shahindezh census district is not included

Source: 1. First National Census of Population and Housing, 1956, Vol.1.
2. Second National Census of Population and Housing, 1966, Vols.151, 168.
3. Third National Census of Population and Housing,1976,Vol.166,186.

Table 5.3 : Urban and Rural Population Increase in East Azarbayejan 1966 - 1976

	1966 Population	1976 Population	Increase 1966 - 76	
			No.	%
Urban	755,458	1,188,292	432,834	57.3
Rural	1,850,856	2,009,393	158,537	8.6
Total	2,606,314	3,197,685	591,371	22.7

Source: Second National Census of Population and Housing, Vol.151.
Third National Census of Population and Housing Vol.166.

5.4.1 Population changes at Shahrestan level

There were considerable variations in the size and rate of population increases at Shahrestan level within East Azarbayejan Ostan (Table 5.4). Tabriz Shahrestan, wherein lies Tabriz City, the Ostan's capital, had the highest volume and rate of increase between 1956 and 1966 (233,659, 46.0 per cent). Percentage change ranged from -12.3 in Sarab Shahrestan to 37.4 in Marand between 1956 and 1966. It should be pointed out that the population decrease in Sarab was due a change in its administrative boundaries at the time of the 1966 census.

Between 1966 and 1976, the population of Meshkinshahr Shahrestan increased by 37.7 per cent which was the highest rate of increase in Ostan, followed by Tabriz Shahrestan with 32.7 and Ardabil with 25.0 per cent. Among the remaining 7 Shahrestans, percentage increase varied from a low 3.9 in Ahar to 22.7 in Maragheh.

As will be seen later, Ahar Shahrestan, which showed the lowest percentage increase in the Ostan, was a Shahrestan of heavy inter-Shahrestan out-migration and experienced heavy losses, particularly in favour of Tabriz City. As a whole, 5 out of 10 Shahrestans - Ahar, Sarab, Hashtrud, Khalkal and Mianeh - showed an increase below the average for the Ostan, and 4 more, Marand, Ardabil, Tabriz, Meshkinshahr had an increase above the Ostan's average; and one Shahrestan, Maragheh showed an increase equal to the Ostan's average.

It should be added here that the considerable increase in the population of Meshkinshahr and Ardabil Shahrestans was due mainly to the migration of some pastoral tribes from neighbouring Shahrestans who settled mainly in the urban and rural areas of these two Shahrestans.

Table 5.4 : Population Change in East Azarbayejan, by Shahrestan, 1956-66 and 1966-76.

Shahrestan	Population			Change 1956-66		Change 1966-76	
	1956	1966	1976	No.	%	No.	%
Tabriz	575,779	809,438	1,073,912	233,659	40.6	264,474	32.7
Ardabil	261,627	296,383	370,599	34,756	13.3	74,216	25.0
Ahar	239,645	285,884	296,997	46,239	19.3	11,113	3.9
Maragheh	211,486	252,122	309,321	40,636	19.2	57,199	22.7
Meshkinshahr	171,174	219,711	301,663	48,537	28.3	81,952	37.3
Mianeh	138,967	174,530	200,233	35,563	25.6	25,703	14.7
Hashtrud	140,953	164,742	175,338	23,789	16.9	10,596	6.4
Marand	111,451	153,195	189,919	41,744	37.4	36,724	23.9
Khalkhal	100,022	134,463	157,171	34,441	34.4	22,708	16.9
Sarab	132,064	115,846	122,532	-16,218	-12.3	6,686	5.8
Total	2,083,168	2,606,314	3,197,685	523,146	25.1	591,371	22.7

Source : First National Census of Population and Housing, 1956, Vol.1.
Second National Census of Population and Housing, 1966, Vol.151.
Third National Census of Population and Housing, 1976, Vol.166.

5.4.2 Urban and rural population change

According to the 1956 census, the total population of East Azarbayejan Ostan was 2,083,168, of which 1,538,820 or 73.9 per cent was rural and the remaining 544,348 or 26.1 per cent was urban. Between 1956 and 1966 the urban population increased by 37.5 per cent and, in 1966, of the total population of the Ostan, 1,857,745 or 71.3 per cent was rural and 748,569, or 28.7 per cent was urban. The 1976 census recorded the urban population of the Ostan as 1,188,292 or 37.2 per cent of the total, showing a growth of 58.7 per cent between 1966 and 1976. In the same period the rural population increased by only 8.2 per cent. These figures suggest the following points:

1. Despite the high fertility rates in the rural areas of the Ostan, rural population growth was well below one per cent per annum, a fact which can be attributed to the rural-urban migration.

2. The considerable increase in the proportion of urban population which occurred between 1966 and 1976 as compared with the preceding decade (1956-1966) not only indicates a marked contrast between urban and rural growth rates but also a marked increase in the rate of urban growth during the second decade.

3. The establishment of various industrial centres in urban areas, particularly in Tabriz City, and improvement in transportation on one hand, the low income and the lack of educational and other social services and facilities in the rural areas of the Ostan on the other hand, provided a strong incentive for migration of rural population toward

urban areas and accelerated the trend of urbanization in the 1966-1976 decade.

Despite the rapid urban population increase, 2,009,393 or 62.8 per cent of the total population of the Ostan was living in rural areas in 1976. It should be noted that East Azarbayejan has long been one of the most important parts of Iran with a significant agricultural and pastoral potentiality, and it was not until recently that, as a result of the establishment of a number of industrial units, especially in Tabriz Shahrestan, that it emerged as one of the major industrial poles of the country (see Chapter 4).

5.5 Distribution of urban places

As Table 5.5 indicates, the urban places of the Ostan numbered 17 in 1956. It should be noted that all Shahrestan centres, regardless of the size of their population, together with all places with more than 5,000 inhabitants were considered as urban places in all the last three censuses. In the present study, all places with more than 5,000 inhabitants will be regarded as urban places, so that valid comparisons can be made between three censuses in terms of the number of urban places. The number of urban places in the Ostan increased from 17 in 1956 to 20 in 1966 and, according to the 1976 census, there were 34 urban places in the Ostan. Table 5.5 shows the distribution of urban places by Shahrestan. One of the most notable features of the urban population of the East Azarbayejan Ostan was the dominance of Tabriz Shahrestan. In 1976, 16 or 47.0 per cent of urban places with a population of 715,478 or 60.2 per cent of the urban population of the Ostan was concentrated in Tabriz Shahrestan. Three out of nine Shahrestans had four urban places each; the remaining six Shahrestans had only one urban place, each of which was the administrative centre of the Shahrestan.

Table 5.5 : Number and Percentage of Urban Places* in East Azarbayejan by Shahrestan, 1956, 66, 76.

Shahrestan	1956		1966		1976	
	No.	%	No.	%	No.	%
Tabriz	7	41.2	9	42.8	16	47.0
Ardabil	1	5.9	1	4.7	1	2.9
Ahar	1	5.9	1	4.7	1	2.9
Maragheh	3	17.6	4	19.0	4	11.8
Meshkinshahr	1	5.9	1	4.7	4	11.8
Mianeh	1	5.9	1	4.7	1	2.9
Hashtrud	-	-	-	-	1	2.9
Marand	1	5.9	2	9.5	4	11.8
Khalkhal	1	5.9	1	4.7	1	2.9
Sarab	1	5.9	1	4.7	1	2.9
Total	17	100.0	21	100.0	34	100.0

* Places with 5,000 or more inhabitants

Source : First National Census of Population and Housing, 1956, Vol.1.
Second National Census of Population and Housing, 1965, Vol.151.
Third National Census of Population and Housing, 1976, Vol.166.

5.5.1 Distribution of urban and rural population by Shahrestan

As Table 5.6 indicates, there were considerable variations in the proportions of the rural and urban population at Shahrestan level. Except in Tabriz Shahrestan, where more than 66.0 per cent of the population was urban, in the remaining nine Shahrestans the urban proportion was less than 40.0 per cent; in other words the majority of people in these Shahrestans were living in rural areas. Moreover, among these nine Shahrestans, the urban population of six Shahrestans accounted for less than 20.0 per cent of their total population. Hashtrud Shahrestan, with only 4.0 per cent urban, had the lowest proportion of urban population, and 96.0 per cent of its population was rural. Figure 5.5 shows the 1976 distribution of rural and urban population by Shahrestan. The high proportion of rural population in the Shahrestans of East Azarbayejan indicates the undeniable significance of the agricultural activities and the importance of rural life in this Ostan. In fact, as in the past, towns and especially the central cities of the Shahrestans, play a major role in rural-urban contacts by providing markets for agricultural and other rural products. As a result of this relationship between towns and rural areas, a considerable number of the Ostan's towns and cities retained their rural characteristics. Indeed a large number of the Ostan's towns clearly have the characteristics of large villages rather than true towns or urban places.

The inhabitants of these towns are chiefly farmers or people who still make a living by agriculture. Towns such as Ilkhechi, 30 km. to the southwest of Tabriz, with more than 81.0 per cent of its economically active population engaged in the agricultural sector, and Bilesavar, in Moghan Shahrestan, with 62.5 per cent of its economically active population in the agricultural sector (Zahedani, 1982, 41) can be quoted as striking examples in this context.

Such towns, as Behnam (1977, 47) has indicated, do not show the characteristics inherent in every true city, and this is apparent as much as their type of urbanism as in the way of life and the outlook of the inhabitants. For the most part they are nothing more than the concentrations of people, fulfilling the function of a local market for the surrounding countryside and owing their promotion to rank of "town" solely to their position as markets and administrative centres (Parsabad, centre of Moghan Shahrestan and Saraskand, centre of Hashtrud Shahrestan).

Some major cities of the world, such as Calcutta, are also characterized by rural and agricultural activities. Discussing the housing problems in Calcutta, Datta-Ray(1984, 25) has noted that some planners even argue that Calcutta is not really a city, that it has only the attribute of numbers without adequate income or commensurate metropolitan facilities. More than 50 per cent of the Calcutta Metropolitan District land is rural, and 70.0 per cent of the population is engaged in agriculture. The revenue generated locally can not, therefore, pay for municipal improvements; and everything depends on subventions. Traditional village values and life-styles, the anchor of poverty, survive in the heart of the city.

Although there are a number of large cities with a long urban tradition, such as Maragheh, Ardabil, Mianeh and Marand, their economic life depends to a great extent upon the prosperity and productivity of the surrounding villages. Undoubtedly, the mass rural-urban migration which is one of the most widespread demographic features of the Ostan reduces the productivity of the rural areas on one

Table 5.6 : Number and Percentage of Urban and Rural Population by Shahrestan, East Azarbayejan, 1966, 1976.

Shahrestan	1966				1976			
	Rural		Urban		Rural		Urban	
	No.	%	No.	%	No.	%	No.	%
Tabriz	341,995	42.2	467,443	57.8	358,434	33.4	715,478	66.6
Ardabil	212,787	71.8	83,596	28.2	222,734	60.1	147,865	39.9
Ahar	261,821	91.6	24,063	8.4	264,899	89.2	32,098	10.8
Maragheh	163,928	65.0	88,194	35.0	187,758	60.7	121,563	39.3
Meshkinshahr	210,721	95.9	8,990	4.1	263,638	87.4	38,025	12.6
Mianeh	146,083	83.7	28,447	16.3	164,069	81.9	36,164	18.1
Hashtrud	164,742	100.0	-	0.0	168,463	96.0	6,875	4.0
Marand	129,377	84.4	23,818	15.6	127,761	67.3	62,158	32.7
Khalkhal	127,508	94.8	6,955	5.2	147,466	93.8	9,705	6.2
Sarab	98,783	85.3	17,063	14.7	104,171	85.0	18,361	15.0
Total	1,857,745	71.3	748,569	28.7	2,009,393	62.8	1,188,292	37.2

Source : Second National Census of Population and Housing, 1966, Vol.s 41-50.
Third National Census of Population and Housing, 1976, Vols. 31-41.

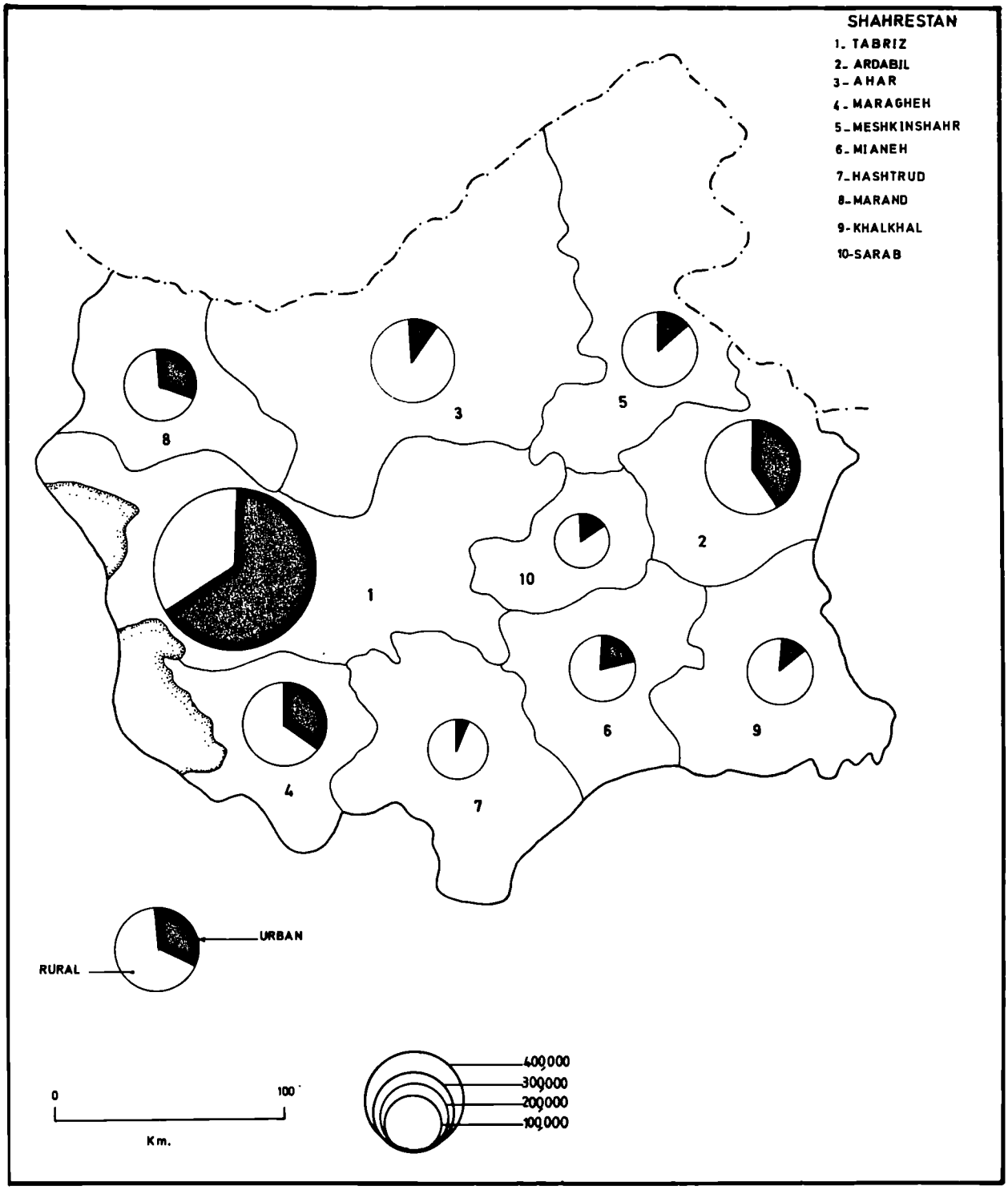

Figure 5.5 Population distribution by rural, urban and by Shahrestan, East Azarbayejan Ostan, 1976.

hand, and on the other hand creates many socio-economic problems in the urban places. The findings of the sample survey conducted in the squatter areas of Tabriz clearly supports this idea (see Chapter 7).

The rapid expansion of the squatter settlements, which is the product of the rural-urban migration,has created serious economic, demographic and environmental problems in Tabriz City as well as in the squatter areas. Since an overwhelming majority of the squatters come from rural areas where they were engaged in the agricultural activities it is likely that the rural areas will be affected by losing their active population.

5.5.2 Urban population change at Shahrestan level, 1956-1976

As Table 5.7 indicates, the urban population of East Azarbayejan increased by 37.5 per cent over a period of 10 years (1956-1966). In the same period, the highest percentage increase occurred in Marand Shahrestan (72.3 per cent). The urban population of Sarab Shahrestan decreased by 6.5 per cent but, as already mentioned, this was due to changes in its administrative boundaries in 1966. In 1956 Hashtrud Shahrestan had no urban places. Among the remaining seven Shahrestans the percentage increase in the urban population varied from 12.7 in Ardabil Shahrestan to 53.9 in Maragheh. Comparing the percentage increase in urban population between 1956 and 1966 with that of the 1966-1976 decade, reveals that the urban population of Shahrestans increased more rapidly between 1966 and 1976. For example, Meshkinshahr Shahrestan with a high 322.9 per cent increase tripled its urban population. The urban population of Marand Shahrestan increased by 160.9 per cent. The urban population of Hashtrud Shahrestan numbered 6,875 in 1976; this Shahrestan had no urban population in 1956 and 1966. The percentage increase among the

Table 5.7 : Urban and Rural Population Change, by Shahrestan, East Azarbayejan, 1956-1976

Shahrestan	Urban Population			Change 1956-66		Change 1966-67		Rural Population			Change 1956-66		Change 1966-76	
	1956	1966	1976	No.	%	No.	%	1956	1966	1976	No.	%	No.	%
Tabriz	327,272	467,443	715,478	140,171	42.8	248,035	53.0	248,507	341,995	358,434	93,488	37.6	16,439	4.8
Ardabil	74,167	83,596	147,865	9,429	12.7	64,269	76.9	187,460	212,789	222,734	25,329	13.5	9,945	4.6
Ahar	19,816	24,063	32,098	4,247	21.4	8,035	33.4	219,829	261,821	264,899	41,992	19.1	3,078	1.2
Maragheh	57,276	88,194	121,563	30,918	53.9	33,369	37.8	154,210	163,928	187,758	9,718	6.3	23,830	14.5
Meshkin-shahr	7,221	8,990	38,025	1,769	24.5	29,035	322.9	163,953	210,721	263,638	46,768	28.5	52,917	25.1
Mianeh	21,100	28,447	36,164	7,347	34.8	7,717	27.1	117,867	146,083	164,069	28,216	23.9	17,986	12.3
Hashtrud	-	-	6,875	-	-	6,875	100.0	140,953	164,742	168,463	23,789	16.9	3,721	2.2
Marand	13,822	23,818	62,158	9,996	72.3	38,340	160.9	97,629	129,377	127,761	31,748	32.5	-1,616	-1.2
Khalkhal	5,422	6,955	9,705	1,533	28.2	2,750	39.5	94,600	127,508	147,466	32,908	34.8	19,958	15.6
Sarab	18,252	17,063	18,361	-1,189	- 6.5	1,298	7.6	113,812	98,783	104,171	-15,029	-13.2	5,388	5.4
Total	544,348	748,569	1,188,292	204,221	37.5	439,723	58.7	1,538,820	1,538,820	2,009,393	318,925	20.7	151,648	8.2

Source: First National Census of Population and Housing, 1956, Vols.3, 16,17,44,49,56,67,89,97,107.
Second National Census of Population and Housing, 1966, Vols. 41-50.
Third National Census of Population and Housing, 1976, Vols. 31-41.

remaining seven Shahrestans ranged from 7.6 in Sarab Shahrestan to 76.9 in Ardabil. It should be added that the increase in Ostan's urban population between 1966 and 1976 was 58.7,which was 21.2 per cent higher than that of the 1956-66 decade. Table 5.7 also shows the number and percentage increase in the rural population of the Ostan between 1956-1966 and 1966-1976. Except in the case of Ardabil, Meshkinshahr and Khalkhal, the percentage increase in the rural population of Shahrestans was lower than that of the urban population between 1956 and 1966. Again, between 1966 and 1976 the percentage increase in the rural populations of all 10 Shahrestans was clearly lower than that of the urban population. It is interesting to note that the rural population of Marand Shahrestan decreased by 1.2 per cent between 1966 and 1976, while the urban population of this Shahrestan showed a high 160.9 per cent of increase. It should be emphasized that the decrease in the rural population of a Shahrestan like Marand, with fertile and cultivable land and considerable facilities such as water resources, can be explained as the starting point of problems both in urban and rural areas of the Shahrestan and such rapid urbanization not only impedes the economic and agricultural development of the area, but also creates a vast number of social and environmental problems in cities as well as in villages.

5.6 Growth of towns and cities, 1956-1976

As stated earlier, in 1956 more than 60.0 per cent of the Ostan's urban population was concentrated in Tabriz Shahrestan. Both the 1966 and 1976 censuses showed the continuing dominance of Tabriz Shahrestan in terms of urban population concentration. Tabriz City, the Ostan's capital, alone accounted for more than

50.0 per cent of the Ostan's urban population in all the three censuses. The concentration of urban population and functions in Tabriz replicates, at the regional scale, the position of Tehran with respect to Iran as a whole. One of the most remarkable characteristics of the urban population of East Azarbayejan is its concentration in a small number of large cities, while a considerable number of cities contain only a small number of inhabitants. In 1956, there were 17 cities in the Ostan and 72.0 per cent of the urban population was living in only three cities, these being Tabriz (53.3 per cent), Ardabil (12.0 per cent) and Maragheh (6.7 per cent). The remaining 27.0 per cent of the urban population was distributed among the other 14 cities. The population of these 14 cities varied from 5,166 in Heris to 21,100 in Mianeh. Figure 5.6 shows the size and distribution of the Ostan's cities in 1956.

In 1966, the Ostan's cities numbered 20, with clear dominance of Tabriz City in housing 403,413 or 53.9 per cent of the urban population of the Ostan. Ardabil City with 83,596 or 11.2 per cent and Maragheh City with 54,106 or 7.2 per cent of the Ostan's urban population were placed after Tabriz. Whereas these three major cities accounted for 72.3 per cent of the urban population of the Ostan, the remaining 17 cities housed only 27.7 per cent of the Ostan's urban population altogether. Figure 5.7 shows the size and distribution of cities in 1966.

In 1976, the number of cities in the Ostan increased to 34. Between 1966 and 1976, the population of Tabriz increased by 194,563 (48.2 per cent) and, with 597,976 inhabitants, accounted for 50.3 per cent of the urban population of the Ostan, followed by Ardabil City, 12.4 per cent and Maragheh, 5.5 per cent of the Ostan's urban

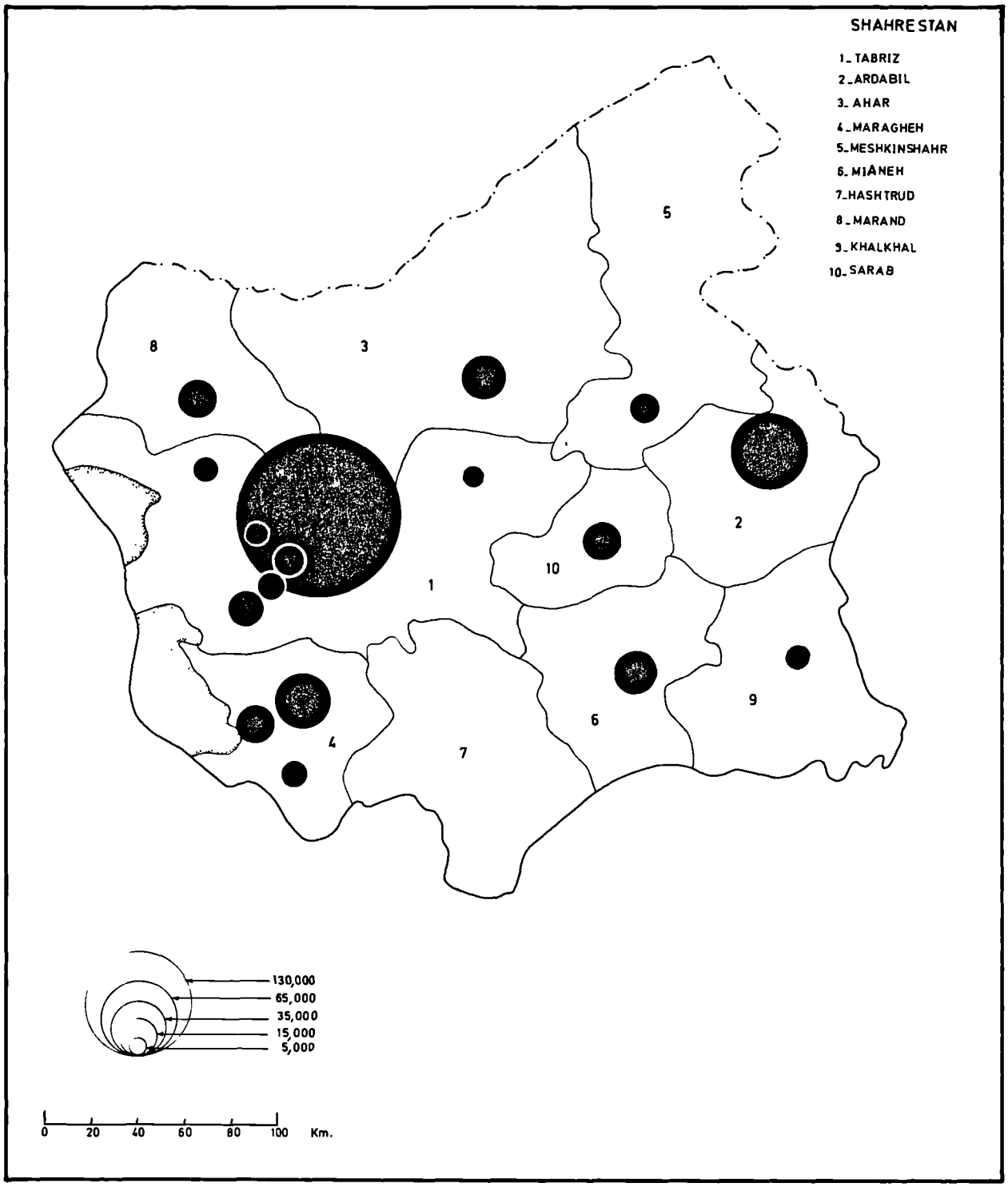

Figure 5.6 Distribution and the size of urban places of East Azarbayejan Ostan by Shahrestan, 1956.

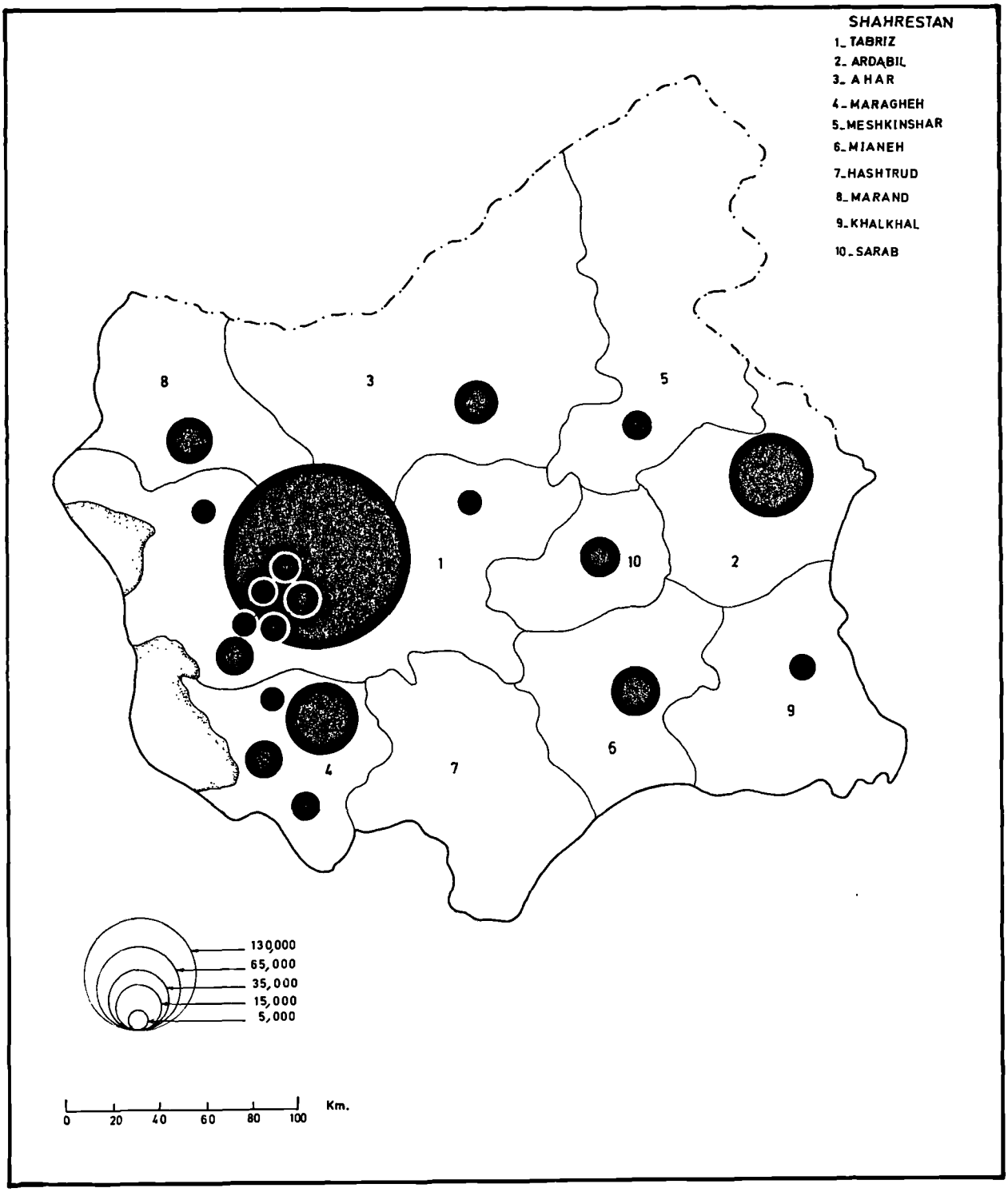

Figure 5.7 Distribution and the size of urban places of East Azarbayejan Ostan by Shahrestan, 1966.

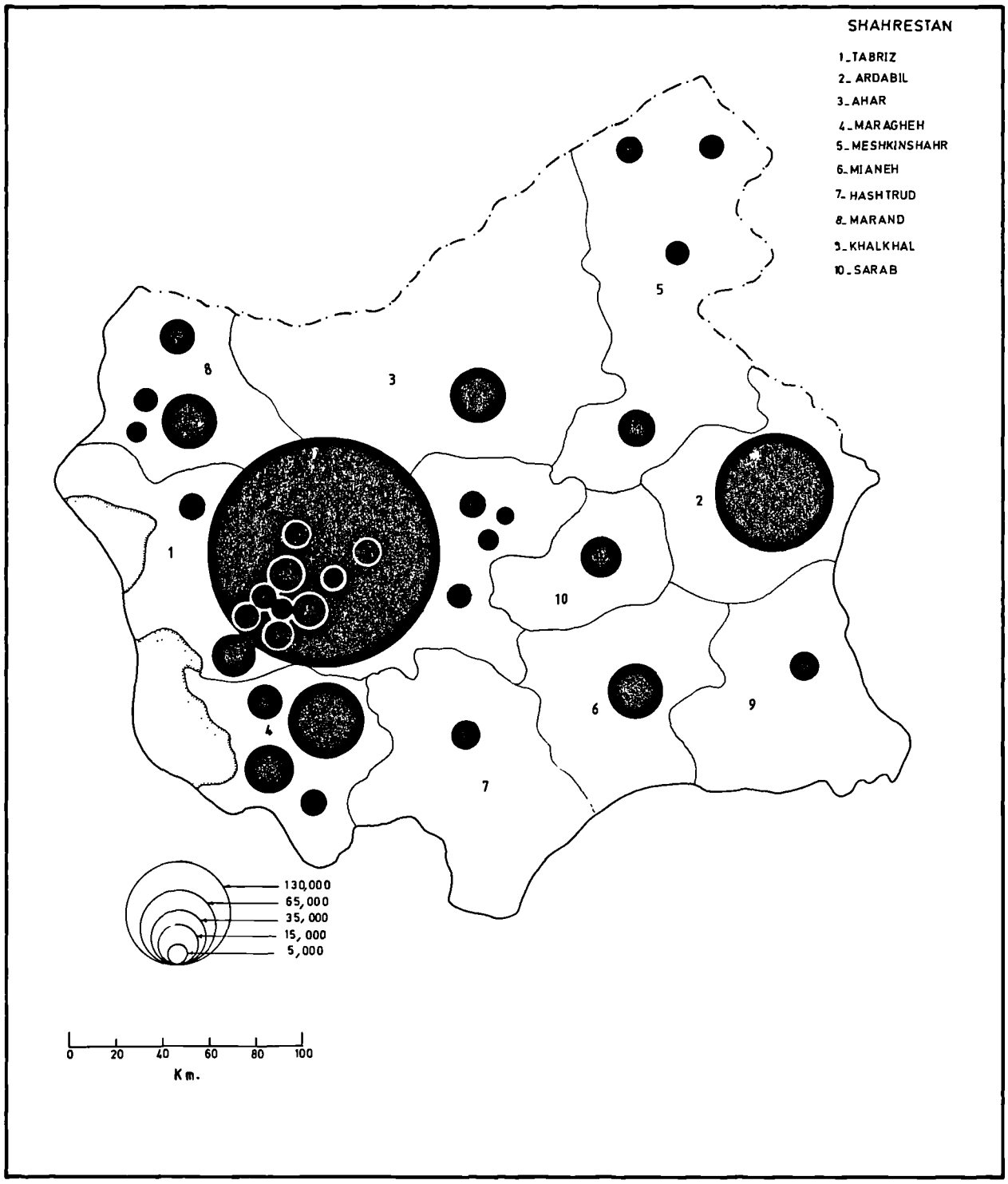

Figure 5.8 Distribution and the size of urban places of East Azarbayejan Ostan by Shahrestan, 1976.

population. Of the remaining 31 cities, 19 had a population between 5,000 and 10,000, 8 cities had a population between 10,000 to 20,000, while 4 more fell into the 20,000 to 40,000 category (Figure 5.8).

5.7 Language and religion

The official language of the country is Persian (Farsi), but Azari Turkish is the native language of people in East Azarbayejan. It should be added here that the word Azari, which means "pertaining to Azarbayejan" has been used to denote various ethnic groups from the 10th century onward. It was applied to the inhabitants of the Azarbayejan Republic founded in the Caucasus in 1918, and has been extended in the present day to cover not only the Soviet Republic of Azarbayejan and Iranian Azarbayejan but also the Turkish populations of Khorasan, Astarabad, Hamadan and other parts of Iran, Daghestan and Georgia.

Azari Turkish has long maintained its identity as a literary language. According to the latest morphological classification of Turkish dialects, it forms the "Southern Turkish" group, along with the Turkish of Anatolia, Turkmenistan, the Balkan peninsula and the Crimean littoral. The dialects of spoken Azari seem to call into the following main groups : (i) Bāku-Shirwan; (ii) Ganja-Karabagh; (iii) Tabriz; (iv) Urumiyeh (The Encyclopaedia of Islam, 1960, 192).

Discussing the introduction of Azari Turkish into Azarbayejan and its development as the main language of the region, Bayani (1974, 65) has noted that the existence of summer pasture lands, abundance of water, and numerous springs on the slopes of Sahand and Sabalan caused a number of Mongols and Turks to settle in Azarbayejan. This settlement began during the Seljuk period when several tribes moved into the region. But, during the Mongol occupation, the royal families, aristocrats, and their army occupied all places that enjoyed a favourable

climate and rich pasture lands in Moghan, Arran, Tabriz, Maragheh and other parts of Azarbayejan. As a result, Mongolian language, traditions and culture were intermingled with Iranian characteristics. The greatest part of the armies of Iran, Turkestan and Southern Russia were composed of Turks of Central and Upper Asia. Not only did the Turkish tribes settle in Azarbayejan, but their impalpable infiltration gradually introduced the Turkish language which eventually replaced the Persian language there. The Turkish dialect used in Azarbayejan is known as Azari Turkish, and is still in vogue there as the urban and rural language of most parts of Azarbayejan.

As noted by Higgins (1984, 59) the largest of Iran's minorities, the Azarbayejanis make up one-fourth to one-third of the population, with large numbers living in Tehran and other Iranian cities as well as in the northwestern region of Iran and in neighbouring regions of the Soviet Union. She has added that, compared with other minorities, Azarbayejanis have been better assimilated socially as well, with representatives at all levels of the political, military and intellectual hierarchies, as well as the religious hierarchy.

According to the 1966 census, the great majority, (99.7 per cent) of the population of East Azarbayejan were Moslems, the remaining small proportion consisting of other religions and sects. In 1976, of the total population of the Ostan 99.8 per cent were Moslems and the remaining 0.2 per cent followed other religions. The percent of Moslems was 99.7

in the urban areas and 99.9 in the rural. The followers of other religions in the Ostan were 5,721, of whom 553 were Jews, 382 Zoroastrians, 4,044 Christians and 742 believed in other religions.

5.8 Age and sex structure

Of the total population of 2,142,270 in 1956 (including Shahindezh census district) there were 1,097,792 males and 1,044,478 females in East Azarbayejan giving a ratio of 105.1 males per 100 females (Table 5.8). The corresponding ratios in 1966 and 1976 were 109.3 and 107.2 respectively. In 1956, sex ratios in rural areas were higher than the urban, 105.4 and 104.2 respectively. In 1966, as in 1956, sex ratios in rural areas were higher than in urban areas, 109.5 and 108.7 respectively. Conversely, 1976 sex ratios in urban areas were higher than in rural areas, 110.4 and 105.3 respectively. This considerable increase in the proportion of males among the population of urban areas suggest a considerable volume of male migration to urban areas during the intercensal period.

Owing to different age-group classifications in 1956 and in 1966 and 1976, precise comparison between 1956 and later censuses in terms of the age and sex structure of the population is not possible. However, data on the age and sex structure of the population of East Azarbayejan in 1956 will be examined separately while those of the 1966 and 1976 will be examined in a comparative manner in order to show the changes in the

Table 5.8 : East Azarbayejan Ostan, Sex Ratios, 1956, 1966, 1976

Sex	Total Population			Urban Population			Rural Population		
	1956	1966	1976	1956	1966	1976	1956	1966	1976
Male	1,097,792	1,360,991	1,654,361	277,769	393,570	623,523	820,023	967,421	1,030,838
Female	1,044,478	1,245,323	1,543,324	266,579	361,888	564,769	777,899	883,435	978,533
Sex Ratio	105.1	109.3	107.2	104.2	108.7	110.4	105.4	109.5	105.3

Source : First National Census of Population and Housing, 1956 Vol.2.
Second National Census of Population and Housing, 1966, Vol.151.
Third National Census of Population and Housing, 1976, Vol.166.

proportion of different age-groups in the 1966-1976 intercensal period.

As Table 5.9 and the age-sex pyramid of the population of East Azarbayejan in 1956 (Figure 5.9) indicate, more than 32.0 per cent of the population was under 10 years of age and nearly 50.0 per cent of the population was under 20 years of age. In 1956 the dependency ratio was 120.0. The dependency ratio is defined as the ratio of the number of persons under 15 and over 65 years of age, to the number of persons in the age group 15-64, multiplied by 100. Thus the dependency ratio shows the number of dependents per 100 adults. For example, the 1956 dependency ratio of 120.0 for East Azarbayejan indicates that there were 120 dependents per 100 adults in the Ostan.

Table 5.10 shows the number and percentages of the population of East Azarbayejan by age-group and sex in 1966 and 1976. In 1966, 35.4 per cent of the population of the Ostan was under 10 years of age and 54.6 per cent was under 20 years of age. The corresponding percentages for 1976 were 33.9 and 56.7. Age-sex pyramids for the total population of the Ostan in 1966 and 1976 (Figure 5.10) indicate a broadening at the base of the pyramids which implies the youthfulness of the population. In both 1966 and 1976 the dependency ratios was 100.0. Comparing the 1976 age-sex pyramid with that of the 1966 shows a decrease in the proportion of some age-groups particularly among males during the intercensal period. Changes

Table 5.9 : Population of East Azarbayejan Ostan by Age-Group and Sex, 1956

Age group	1956					
	Both sexes		Male		Female	
	No.	%	No.	%	No.	%
0 - 4	376,154	17.6	194,379	17.7	181,775	17.4
5 - 9	309,901	14.5	158,220	14.4	151,681	14.5
10 - 14	207,140	9.7	113,466	10.3	93,674	9.0
15 - 19	173,345	8.0	87.088	7.9	86.257	8.2
20 - 24	176,635	8.2	82,812	7.5	93,823	9.0
25 - 34	337,360	15.7	169,962	15.5	167,398	16.0
35 - 44	190,974	8.9	100,732	9.2	90,242	8.6
45 - 54	158,017	7.4	77,529	7.0	80,488	7.7
55 - 64	126,801	5.9	66,570	6.0	60,231	5.7
65+	85,943	4.0	47,034	4.3	38,909	3.7
Total	2,142,270	100.0	1,097,792	100.0	1,044,478	100.0

Source: Fist National Census of Population and Housing, 1956, Vol.2.

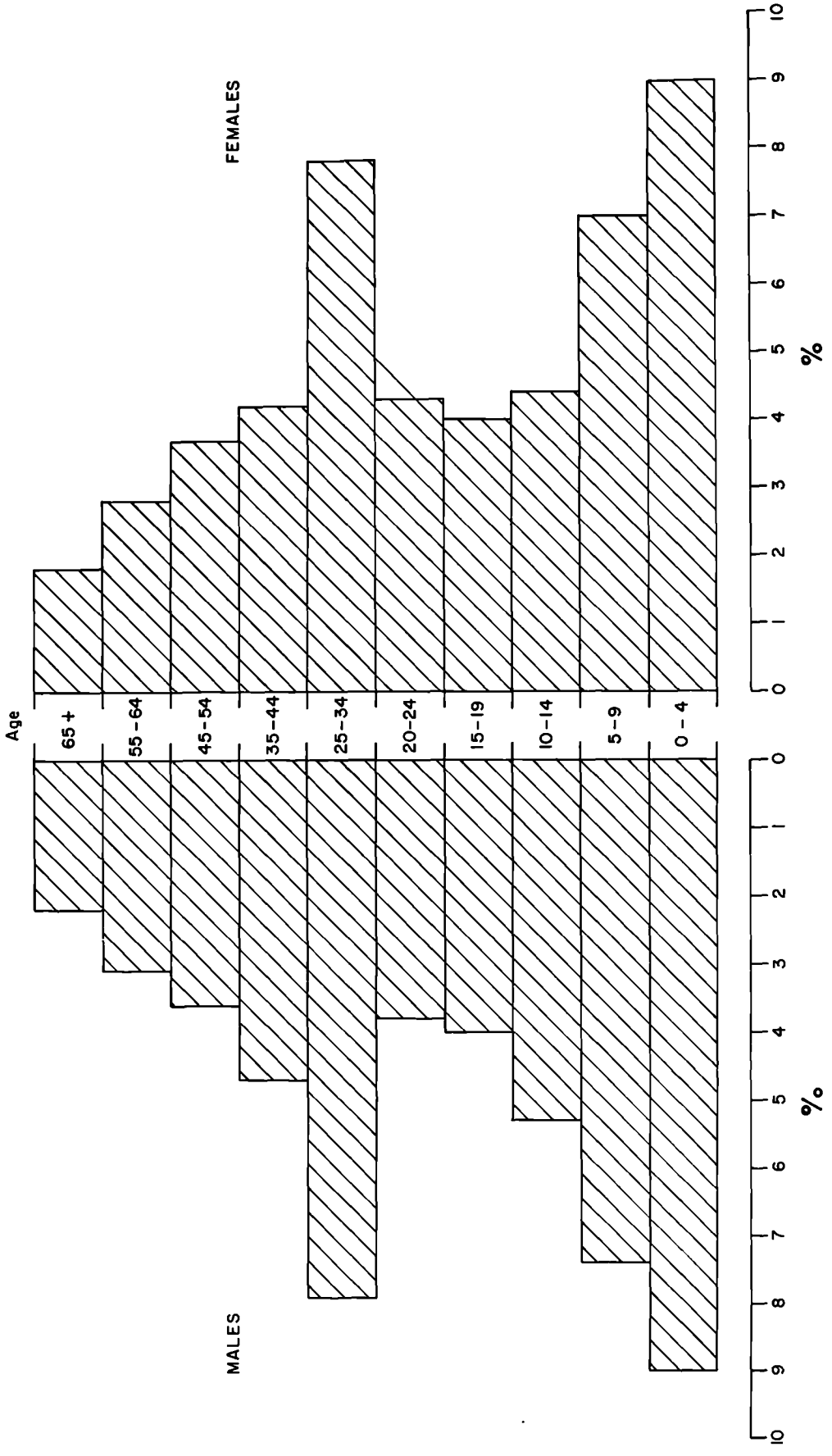

Figure 5.9 Age-sex pyramid of the population, East Azarbayejan Ostan, 1956.
Source: First National Census of Population and Housing, 1956, vol.2.

Table 5.10 : Population of East Azarbayejan Ostan by Age-group and Sex. 1966 and 1976

Age-group	1966						1976					
	Both sexes		Male		Female		Both sexes		Male		Female	
0 - 4	491,993	18.9	262,810	19.4	229,183	18.5	549,824	17.2	291,767	17.6	258.057	16.7
5 - 9	428,319	16.5	222,478	16.4	205,841	16.6	534,644	16.7	281,121	17.0	253,523	16.4
10 - 14	284,383	11.0	150,706	11.1	133,677	10.8	409,586	12.8	215,499	13.0	194,087	12.6
15 - 19	212,267	8.2	107,441	7.9	104,826	8.4	321,282	10.0	163,478	9.9	157,804	10.2
20 - 24	176,019	6.8	84,647	6.2	91,372	7.4	232,084	7.2	106,297	6.4	125,787	8.1
25 - 29	171,516	6.6	83,254	6.1	88,262	7.1	181,064	5.7	85,232	5.1	95,832	6.2
30 - 34	169,534	6.5	86,721	6.4	82,813	6.7	156,215	4.9	74,846	4.5	81,369	5.3
35 - 39	156,285	6.0	84,067	6.2	72,218	5.8	156,133	4.9	77,442	4.7	78,691	5.1
40 - 44	141,228	5.4	78,473	5.8	62,755	5.0	162,367	5.0	84,960	5.1	77,407	5.0
45 - 49	77,142	3.0	44,573	3.3	32,569	2.6	146,693	4.6	79,851	4.8	66,842	4.3
50 - 54	62,849	2.4	31,498	2.3	31,351	2.5	130,668	4.0	73,527	4.4	57,141	3.7
55 - 59	45,134	1.7	23,254	1.7	21,880	1.8	58,000	1.8	34,033	2.0	23,967	1.5
60 - 64	72,830	2.8	37,722	2.8	35,108	2.8	50,478	1.6	26,395	1.6	24,083	1.6
65+	106,940	4.1	58,035	4.3	48,905	3.9	108,647	3.4	59,913	3.4	48,734	3.1
Total	2,596,439	100.0	1,355,679	100.0	1,240,760	100.0	3,197,685	100.0	1,654,361	100.0	1,543,324	100.0

Source : Second National Census of Population and Housing, 1966, Vol.151.
Third National Census of Population and Housing, 1976, Vol.166.

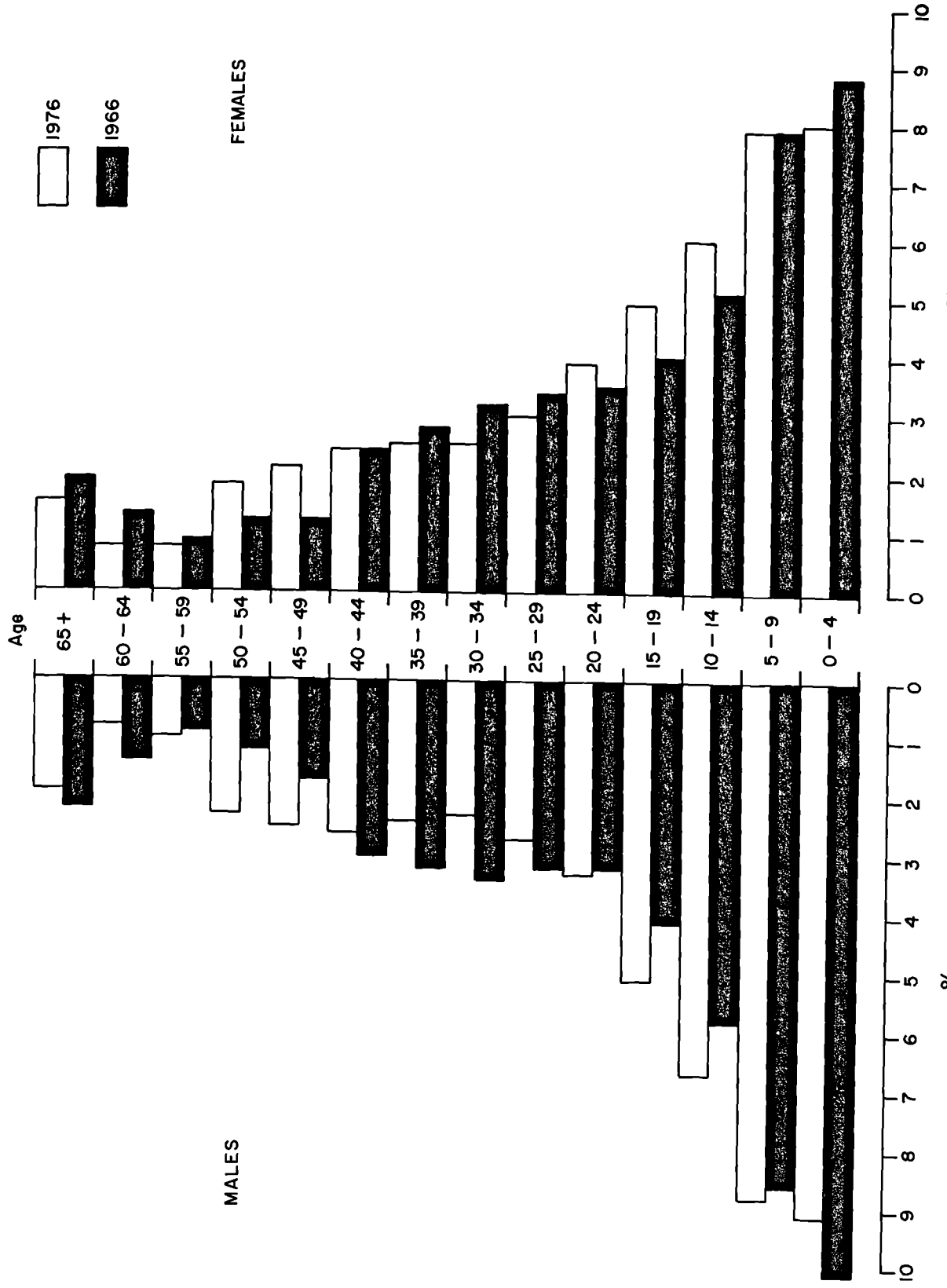

Figure 5.10 Age-sex pyramids of the population of East Azarbayejan Ostan, 1966 and 1976.
Source: Second National Census vols. 151 and 166.

in the percentage of the age-groups such as 25-29, 30-34 and 35-39 can be attributed to the out-migration of population in these age-groups (those of working age) from the Ostan looking for a job in other Ostans particularly in Central Ostan.

5.9 Manpower characteristics

In 1966 of the total of the 1,158,420 persons 10 years of age and over in East Azarbayejan, 554,580 or 47.9 per cent were economically active and 603,840 or 52.1 per cent were economically inactive. Of the 598,334 male population 10 years old and over, 510,225 or 85.3 per cent were economically active and 88,109 or 14.7 per cent were economically inactive (students, retired persons, persons unable to work). Of the 560,086 female population 10 years old and over, only 44,355 or 7.9 per cent were economically active and the remaining 515,731, or 92.1 per cent were economically inactive (home makers, students).

The proportion of economically active males in the urban areas (73.6 per cent) was lower than in the rural areas (85.3) because of the greater tendency for young males in the city to continue their education rather than seeking employment. For females 10 years old and over, the proportion economically active was 9.3 per cent in the urban areas and 7.9 per cent in the rural areas. (Plan and Budget Organization Statistical Centre of Iran Second National Census of Population and Housing 1966, Vol.151).

The number of people 10 years old and over in East Azarbayejan increased from 1,158,420 in 1966 to 2,113,217 in 1976, of whom 901,105 or 42.6 per cent were economically active and 1,212,112 or 57.4 per cent were economically inactive. Thus the percentage of the

economically inactive population increased by more than 5.0 per cent in the intercensal period. Of the 1,081,473 male population 10 years of age and over in 1976, 814,042 or 75.3 per cent were economically active, while of the 1,031,744 female population 10 years of age and over only 87,063 or 8.4 per cent were economically active. Of the 446,578 male population 10 years of age and over in urban areas 302,034 or 67.6 per cent were economically active, while of the 398,768 female population 10 years of age and over in urban areas only 25,683 or 6.4 per cent were economically active. In rural areas of the Ostan, of the 684,895 males 10 years of age and over 512,008 or 74.7 per cent were economically active and of the 632,976 females 10 years of age and more 61,380 or 9.7 per cent were economically active. Thus in rural areas the proportion of the economically active population (both sexes) was higher than that in the urban areas. (Plan and Budget Organization Statistical Centre of Iran, Third National Census of Population and Housing, 1976, Vol.166). Table 5.11 shows the population 10 years of age and over of East Azarbayejan by economic activity status, area and sex in 1976.

5.9.1 Major industry groups

In 1966, in East Azarbayejan, the leading economic activity was agriculture which accounted for 50.2 per cent of the total employed population. Other important activities were services, commerce, transport, which together accounted for 21.2 per cent, and manufacturing and construction, which accounted for 19.4 and 8.6 per cent of the total employed population respectively.

Table 5.11 : East Azarbayejan Ostan.: Population 10 years of age and over, by economic activity status, area and sex, 1976

Activity status	Ostan			Urban areas		Rural areas	
	Both Sexes	Male	Female	Male	Female	Male	Female
Population 10 years of age and over	2,113,217	1,081,473	1,031,744	446,578	398,768	683,895	632,976
Economically active	901,105	814,042	87,063	302,034	25,683	512,008	61,380
Employed	836,675	752,521	84,154	287,976	24,705	464,545	59,449
Seasonally unemployed	39,134	37,683	1,451	2,673	109	35,010	1,342
Seeking work, previously employed	3,263	3,010	253	1,459	97	1,551	156
Seeking work, previously unemployed	22,033	20,828	1,205	9,926	772	10,902	433
Economically inactive	1,212,112	267,431	944,681	144,544	373,085	122,887	571,596

Source : Third National Census of Population and Housing, 1976, Vol.166.

In 1976, of the 836,675 employed population 316,303 or 37.8 per cent were active in the agricultural sector, 324,420, or 38.8 per cent were active in the industrial sector (mining, quarrying, manufacturing, construction, electricity, gas and water) and 190,820 or 22.8 per cent were active in services.

In 1976, of the total 836,675 employed population in the Ostan 312,681, or 37.4 per cent were active in urban areas and 523,994 or 62.6 per cent were active in rural areas.

Of the total 312,681 employed population in urban areas, 20,825 (6.7 per cent) were active in the agricultural sector, 140,157 (44.8 per cent) were active in the industrial sector and 151,729 (48.5 per cent) were active in services. Of the total 523,994 employed population in rural areas, as might be expected, 295,478 (56.4 per cent) were active in the agricultural sector, 184,263 (35.2 per cent) were active in the industrial sector and only 44,253 (8.4 per cent) were active in services. Table 5.12 shows the percentage employed population of East Azarbayejan by major activity groups in 1966 and 1976.

As Table 5.12 indicates, there have been marked changes in the composition of employment in different industries in the intercensal period (1966-1976). Worth noting is the decrease of the percentage employed in agriculture and this has important implications, as will be shown later, for rural-urban migration. Although the proportion of employed population in the manufacturing sector in the whole of the Ostan (urban and rural) increased by 3.2 per cent, there has been a considerable decrease in the percentage of population employed in the manufacturing sector in urban areas (7.3 per cent).

Table 5.12 : Percentage Employed Population of East Azarbayejan Ostan 10 Years of Age and Over by Major Activity Groups, 1966 and 1976

Area	Agriculture		Mining and Quarrying		Manufacture		Construction		Electricity, Gas, Water		Commerce, Transport service, etc.	
	1966	1976	1966	1976	1966	1976	1966	1976	1966	1976	1966	1976
Urban	7.2	6.6	-	0.3	35.7	28.4	9.6	15.3	1.3	0.8	46.2	48.5
Rural	68.8	56.4	0.3	0.08	12.3	19.2	8.1	15.8	0.1	0.09	10.4	8.4
Total	50.2	37.8	0.2	0.1	19.4	22.6	8.6	15.6	0.4	0.4	21.2	23.5

Source: Second National Census of Population and Housing 1966, Vol.151.

In tertiary activities there has been little change in the percentage of employment in different service industries during the intercensal period. the figures shown in Table 5.12 give the relationship between employment in different industries.

In order to show the significance of different industry groups at Shahrestan level, the number and percentage of employed population of 10 Shahrestans in 1976 is presented in Table 5.13. Except Tabriz Shahrestan, which had 22.9 per cent of its employed population active in the agricultural sector, in the remaining nine Shahrestans the percentage of the employed population in the agricultural sector was above 30.0 per cent. Meshkinshahr Shahrestan with 64.3 per cent showed the highest percentage of employed population active in the agricultural sector, followed by Hashtrud with 58.4 and Khalkhal with 54.6 per cent. This can be explained by the fact that an overwhelming majority of the population of these three Shahrestans live in the villages, following a rural way of life, mostly engaged in agricultural activities. Furthermore, their small towns with rural characteristics provide few facilities for the establishment of industrial units.

Table 5.13 : Number and Percentage Employed Population of East Azarbayejan Ostan 10 Years of Age and Over by Major Activity Groups and by Shahrestan, 1976

Shahrestan	Agriculture		- Mining and quarrying		Manufacture		Construction		Electricity, Gas, Water		Commerce Transport Service etc.		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Tabriz	67,686	22.9	697	0.2	91,639	31.1	36,554	12.4	1,839	0.6	96,610	32.8	295,025	100.0
Ardabil	36,046	42.1	104	0.1	13,294	15.5	15,121	17.7	216	0.3	20,805	24.3	85,586	100.0
Ahar	47,714	50.5	42	-	28,385	30.1	9,750	10.3	63	0.1	8,482	8.9	94,436	100.0
Maragheh	29,275	31.8	74	0.1	20,000	21.7	12,447	13.5	193	0.2	30,174	32.7	92,163	100.0
Meshkinshahr	49,030	64.3	17	-	7,037	9.2	11,640	15.3	543	0.7	8,031	10.5	76,298	100.0
Mianeh	19,097	40.9	81	0.2	3,703	7.9	15,860	34.0	77	0.2	7,861	16.9	46,679	100.0
Hashtrud	25,493	58.4	43	0.1	4,752	10.9	10,139	23.2	23	0.1	3,234	7.5	43,684	100.0
Marand	14,772	31.8	141	0.3	13,692	29.4	5,755	12.4	69	0.1	12,094	25.9	46,523	100.0
Khalkhal	20,624	54.6	15	-	3,215	8.5	9,380	24.8	31	0.1	4,502	11.9	37,767	100.0
Sarab	6,566	35.5	29	0.2	3,465	18.7	4,262	23.0	33	0.2	4,159	22.4	18,514	100.0
Total Ostan	316,303	37.8	1,243	0.1	189,182	22.6	130,908	15.6	3,087	0.4	195,952	23.5	836,675	100.0

Source : Third National Census of Population and Housing, 1976, Vols. 31-41.

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CHAPTER 6

INTER-SHAHRESTAN MIGRATION IN EAST AZARBAYEJAN

6.1 Introduction

As well as being the main Ostan of out-migration in Iran, East Azarbayejan has been the scene of considerable internal population movements both within and between its constituent Shahrestans.

As a result of inter-Shahrestan and intra-Shahrestan migration there have been considerable changes in both rural and urban areas of East Azarbayejan over the 20 years from 1956 to 1976. East Azarbayejan is an Ostan with significant agricultural potentialities and is undergoing great industrial changes. Inter-Shahrestan migration, particularly rural-urban migration, at this stage of industrial development is an acute problem in this Ostan.

Unfortunately, in Iran, data on the intra-Shahrestan migration are non-existent and the Shahrestans of East Azarbayejan are no exception.

Despite the fact that the collection of data on migratory movements within an administrative division like a Shahrestan with several urban places and a large number of villages seems to be of vital importance in the improvement of regional planning, the last three decennial censuses of Iran (1956, 1966, 1976), fail to provide data on intra-Shahrestan movement. Furthermore, the data on inter-Shahrestan migration collected in 1956 and 1966 are not comparable with those of the 1976 census in terms of the patterns of inter-Shahrestan migration flows.

In spite of all these problems, an attempt is made to examine the pattern of inter-Shahrestan migration in East Azarbayejan. In fact the present analysis is the first attempt at an examination of the patterns of intra-Ostan migration in Iran.

The significance of data on migratory movements in the improvement of regional planning is emphasised by several studies. For example, according to the International Development Research Centre (1977, 73), policy-makers and social planners are primarily concerned with the answers to analytic questions involving the interrelationship between population movements and socio-economic factors. They may wish to know, for example, whether investments in a village or regional centre will attract workers, and other business activities to create a "growth pole" for a subregion, or they may wish to know whether the outflow of young workers from a rural area to nearby towns will lower agricultural production.

Thus it may be concluded that the availability of data on various aspects of population, particularly the migratory movements of population, in a region to a great extent facilitates the examination and evaluation of the human resources of that region which can be taken into consideration in regional plannings and policy making.

In this section, first the patterns of inter-Shahrestan migration flows in East Azarbayejan based on the 1956 and 1966 migration data will be examined in a comparative manner, after which an attempt is made to show the changes in the volume of migrants of Shahrestans between 1966 and 1976 by the examination of the data based on the birthplace of inter-Shahrestan migrants.

Since data showing the volume of the rural-urban migration do not exist, an attempt is made to estimate the rural-urban migration in East Azarbayejan by means of the Census Survival Ratio (CSR) technique, suggested in Methods of Measuring Internal Migration, (United Nations 1970). This method is applicable because, in the Iranian censuses the age tables are prepared separately for urban and rural areas. In an attempt to assess the contribution of migration to urban growth, the annual growth rates for the decades 1956-66 and 1966-76 of the 17 towns and cities of the Ostan with more than 5,000 inhabitants in 1956 will be compared with the growth rates for the population of the Ostan as a whole. Furthermore, using the Spearman Rank Correlation Coefficient technique, an attempt is made to show the extent to which the volume of the inter-Shahrestan migration is related to the size of urban and rural population of the Shahrestans.

Finally, the age and sex structure of inter-Shahrestan migrants will be examined and comparisons will be made between migrants and non-migrants in terms of their age and sex structure.

6.2 Inter-Shahrestan migration flow, 1956, 1966

Prior to the 1956 census, there was no reliable data on population, particularly on inter-Shahrestan migration, in East Azarbayejan. However, the 1956 census for the first time provided data based on the place of birth and place of enumeration of population not only for Iran as a whole but also for individiual Ostans. Since the Shahrestan of birth and of residence of the population were both given in the 1956 census, migration flows between the 10 Shahrestans of the Ostan can be examined by means of an inter-Shahrestan migration matrix which shows the flows from each Shahrestan to the other nine. In order to show the nature of the intra-Ostan migration in East Azarbayejan, migration flows between ten Shahrestans of the Ostan based on the 1956 census are presented in Table 6.1. As Table 6.1 indicates, 84 of a possible 90 flows were recorded in 1956, of which 44 flows contained less than 100 migrants each, 26 more had 100 to 500 migrants each, while the remaining 14 flows had 500 to 3,000 migrants each. It should be noted that 5 out of the 14 flows with 500 to 3,000, contained more than 1,000 migrants each. This shows clearly that inter-Shahrestan migration was dominated by a small number of relatively large flows. 3 out of the 5 largest flows were toward Tabriz Shahrestan, being those from Ahar (2,993 migrants), Maragheh (1,989 migrants) and Marand (1,345 migrants). Table 6.2 lists the intra-Ostan migration flows greater than 500, and Figure 6.1 illustrates these flows in 1956.

Comparing the intra-Ostan migration matrix in 1956 with that of the 1966 (Table 6.3) shows a considerable increase in the size of migration flows over a period of ten years. The total

Table 6.1 : Intra-Ostan Migration Matrix, East Azarbayejan Ostan, 1956

SHAHRESTAN OF BIRTH		SHAHRESTAN OF ENUMERATION										
		Tabriz	Ardabil	Ahar	Mara-gheh	Meshkin-shahr	Mianeh	Hasht-rud	Marand	Khal-khal	Sarab	Total
1	Tabriz		846	369	1,405	544	838	0	999	62	446	5,509
2	Ardabil	747		58	103	2,507	235	28	39	376	525	4,618
3	Ahar	2,993	60		28	387	32	7	463	8	73	4,051
4	Maragheh	1,989	47	11		27	267	0	61	13	2	2,417
5	Meshkinshahr	33	201	447	0		8	0	18	8	385	1,100
6	Mianeh	500	177	1	129	262		330	4	310	139	1,852
7	Hashtrud	147	1	0	62	1	120		24	11	2	368
8	Marand	1,345	26	57	36	79	66	4		6	0	1,619
9	Khalkhal	113	216	2	17	23	934	9	6		11	1,331
10	Sarab	635	645	3	32	409	451	117	21	139		2,461
	Total	8,502	2,228	948	1,812	4,239	2,951	495	1,635	933	1,583	25,326

Source: First National Census of Population and Housing, 1956, Vol. 3, 16, 17, 44, 49, 56, 67, 89, 97, 107.

Table 6.2 : Inter Shahrestan Migration Flows Greater than 500
East Azarbayejan 1956

From	To	Total
Ahar	Tabriz	2,993
Ardabil	Meshkinshahr	2,507
Maragheh	Tabriz	1,989
Tabriz	Maragheh	1,405
Marand	Tabriz	1,345
Tabriz	Marand	999
Khalkhal	Mianeh	934
Tabriz	Ardabil	846
Tabriz	Mianeh	838
Ardabil	Tabriz	747
Sarab	Ardabil	645
Sarab	Tabriz	635
Tabriz	Meshkinshahr	544
Ardabil	Sarab	525
Total		16,952

Source: Table 6.1

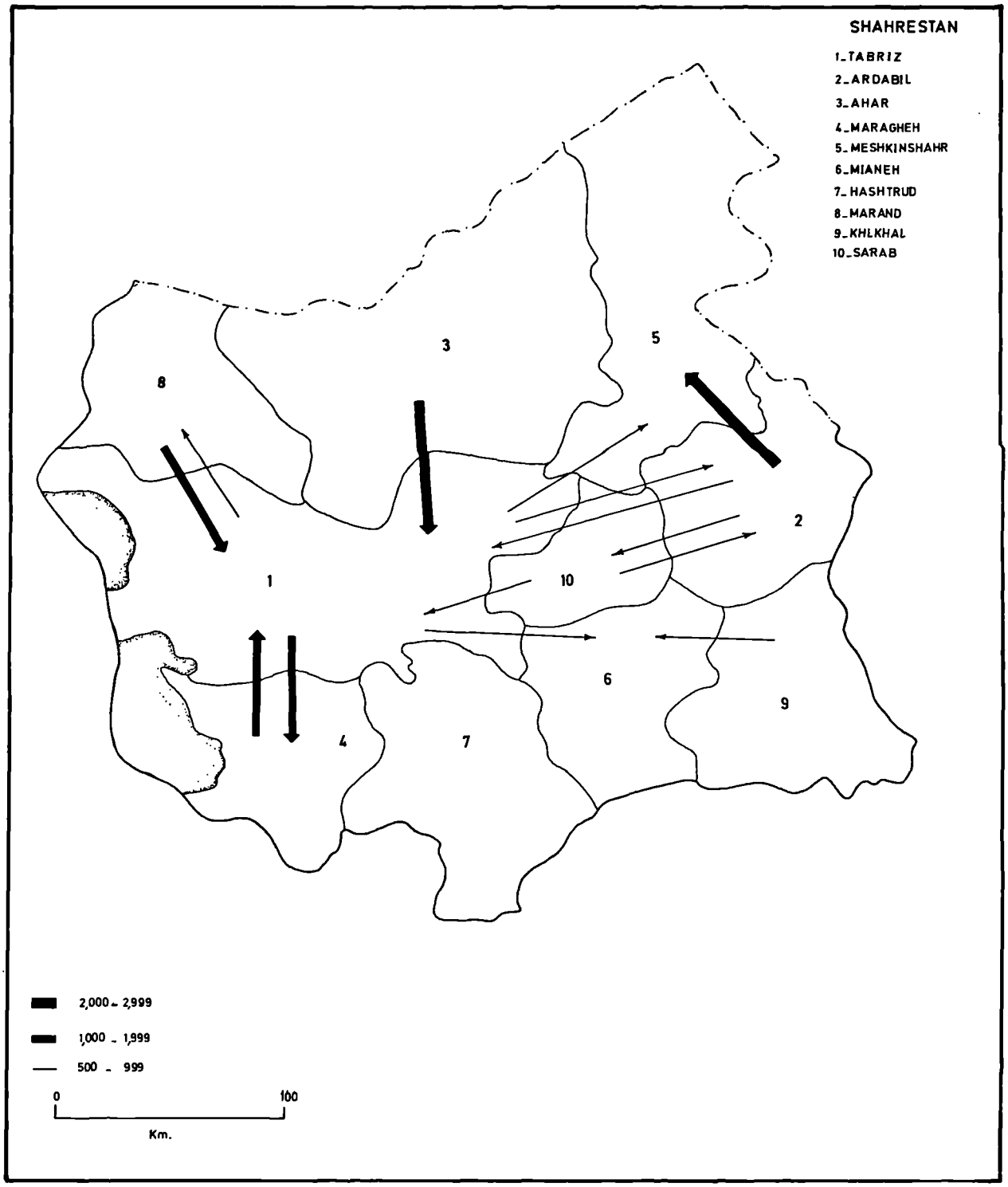

Figure 6.1 Inter-Shahrestan migration flows greater than 500, East Azarbayejan Ostan, 1956.

Table 6.3 : Intra-Ostan Migration Matrix, East-Azarbayejan Ostan, 1966

SHAHRESTAN OF BIRTH		SHAHRESTAN OF ENUMERATION										
		Tabriz	Ardabil	Ahar	Mara-gheh	Meshkin-shahr	Mianeh	Hasht-rūd	Marand	Khal-khal	Sarab	Total
1	Tabriz		495	815	3,732	392	542	395	2,318	116	809	9,614
2	Ardabil	1,419		113	1,316	2,061	124	23	140	317	255	5,768
3	Ahar	16,900	77		583	1,977	75	38	1,170	50	168	21,038
4	Maragheh	2,580	113	116		51	177	756	183	20	99	4,095
5	Meshkinshahr	495	2,547	863	295		12	8	69	20	197	4,506
6	Mianeh	946	115	46	507	32		263	154	208	85	2,356
7	Hashtrud	1,575	10	18	282	6	478		27	1	34	2,431
8	Marand	3,929	35	108	233	53	38	33		16	68	4,513
9	Khalkhal	346	157	44	162	24	872	18	40		69	1,732
10	Sarab	7,804	240	73	368	210	219	29	86	14		9,043
	Total	35,994	3,789	2,196	7,478	4,806	2,537	2,563	4,187	762	1,784	65,096

Source: Second National Census of Population and Housing, 1966, Vols. 41-50.

number of inter-Shahrestan migrants increased from 25,326 in 1956 to 65,096 in 1966, an increase of 39,770 or 157.0 per cent during the 1956-1966 decade. There was a notable increase in the number of large flows (flows with more than 1,000 migrants). These increased from 5 in 1956 to 13 in 1966, of which 4 flows had more than 3,000 migrants each. In 1966, a considerable number of the largest flows were toward Tabriz Shahrestan (6 out of the 13). Of the remaining 7 large flows, two were toward Maragheh, two toward Meshkinshahr, two more toward Marand, and finally one was toward Ardabil Shahrestan. As in 1956, Tabriz Shahrestan maintained its dominance in terms of attracting the large migration flows in 1966. The largest flow toward Tabriz Shahrestan was from Ahar (16,900 migrants). Flowsfrom Sarab (7,804) and Marand (3,929 migrants) were the next largest flows toward Tabriz Shahrestan. In short, increasing numbers of large inter-Shahrestan flows, particularly toward Maragheh, Marand and Meshkinshahr Shahrestans in 1966, illustrates the acceleration of inter-Shahrestan migration in the Ostan during the intercensal period (1956-1966). Table 6.4 shows the 22 inter-Shahrestan migration flows greater than 500 in 1966, and Figure 6.2 demonstrates these flows, indicating a considerable increase in the number and the size of large flows during the intercensal period (1956-1966), when compared with the similar Figure (Fig.6.1) for 1956.

Table 6.4 : Inter-Shahrestan Migration Flows Greater than 500, East Azarbayejan 1966

From	To	Total
Ahar	Tabriz	16,900
Sarab	Tabriz	7,804
Marand	Tabriz	3,929
Tabriz	Maragheh	3,732
Maragheh	Tabriz	2,580
Meshkinshahr	Ardabil	2,547
Tabriz	Marand	2,318
Ardabil	Meshkinshahr	2,061
Ahar	Meshkinshahr	1,977
Hashtrud	Tabriz	1,575
Ardabil	Tabriz	1,419
Ardabil	Maragheh	1,316
Ahar	Marand	1,170
Mianeh	Tabriz	946
Khalkhal	Mianeh	872
Meshkinshahr	Ahar	863
Tabriz	Ahar	815
Tabriz	Sarab	809
Maragheh	Hashtrud	756
Ahar	Maragheh	583
Tabriz	Mianeh	542
Mianeh	Maragheh	507
Total		56,021

Source : Table 6.3.

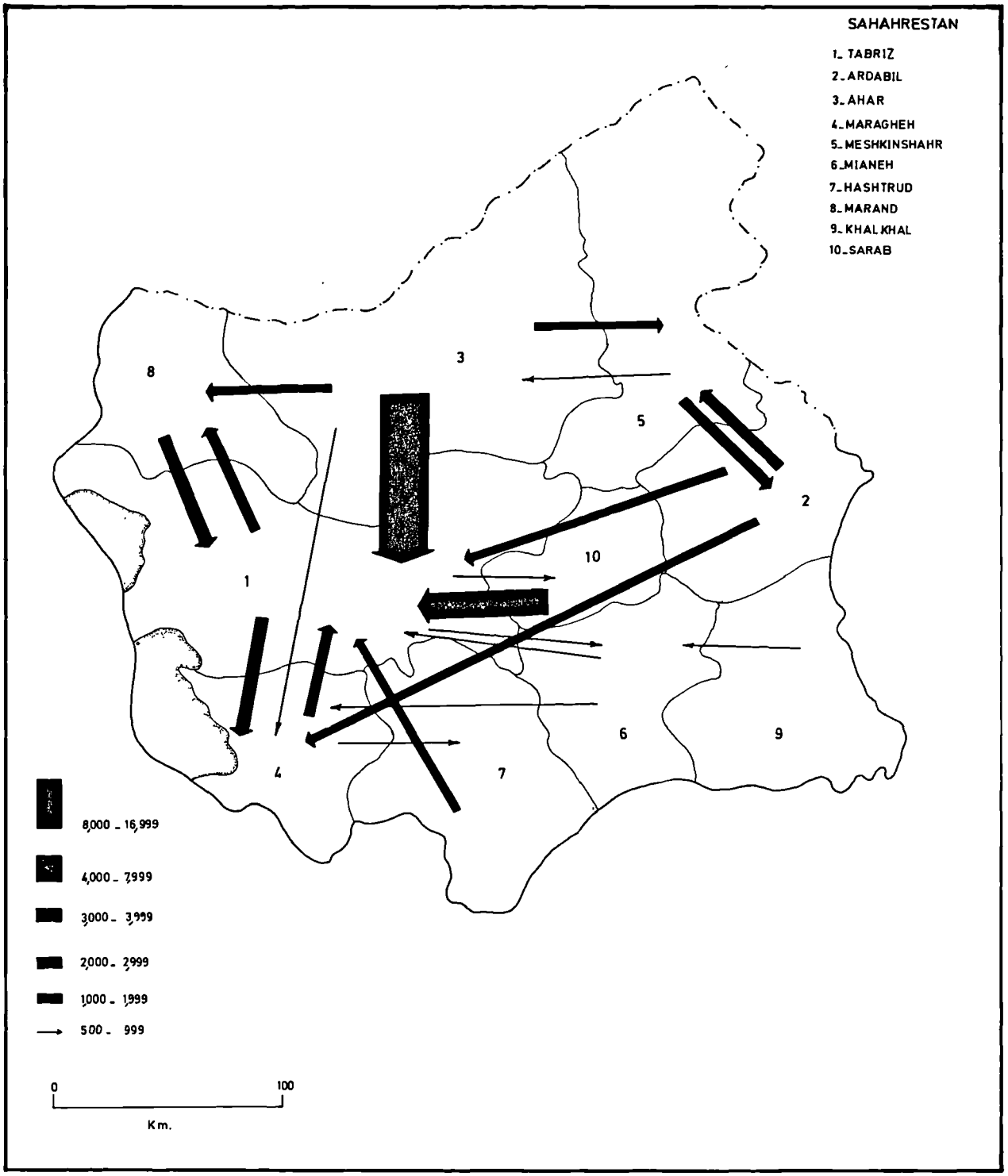

Figure 6.2 Inter-Shahrestan migration flows greater than 500, East Azarbayejan Ostan, 1966.

6.2.1 Patterns of net-inter-Shahrestan migration in East Azarbayejan Ostan, 1956 - 1966

Table 6.5 shows the number and percentage of inter-Shahrestan migrants of East Azarbayejan Ostan based on the 1956 census. An attempt is made to distinguish the situation of each of the ten Shahrestans in terms of attracting inter-Shahrestan migrants, which in turn will give some idea of the strength of the pull and push factors of these ten Shahrestans. Moreover, by comparing Table 6.5 with Table 6.6, which presents similar data for 1966, trends of inter-Shahrestan migration during the intercensal period will be shown. Finally, in order to acquire a better picture of the patterns of net-inter-Shahrestan migration between 1956 and 1966, net-intercensal migration will be calculated, using the data presented in Tables 6.5 and 6.6.

As Table 6.5 indicates, there were massive differences between Shahrestans in the size of their populations. Tabriz Shahrestan had an especial status in the Ostan, simply because of the situation of Tabriz City which functions as a Shahrestan centre, as well as the Ostan's capital. Due to its historical background, Tabriz City has long been the political, administrative and trading centre of East Azarbayejan. In 1956, Tabriz City was the second largest city in Iran after the capital, Tehran. Although, according to the last three censues, East Azarbayejan, particularly Tabriz City, experienced enormous net out-migration in favour of the other Ostans, at the regional scale it has been the principal destination for intra-Ostan migrants in recent years due mainly to its industrialisation. The effects of the increasing migration flows, especially flows from rural areas, on Tabriz City will be discussed in more detail later.

Table 6.5 : Total population, in-migrants, out-migrants, net-migration, and migration rate by Shahrestan, East Azarbayejan Ostan, 1956

Shahrestan of origin and destination	Total population	%	In-migrant	%	Out-migrant	%	Total migrant	%	Net-migration	Gross migration rate per 1,000	Net migration rate per 1,000	Net migration as % of gross
1 Tabriz	575,779	27.6	8,502	33.6	5,509	21.7	14,011	27.6	+ 2,993	24.3	+ 5.2	21.3
2 Ardabil	261,627	12.5	2,228	8.8	4,618	18.2	6,846	13.5	- 2,390	26.1	- 9.1	34.9
3 Ahar	239,645	11.5	948	3.7	4,051	16.0	4,999	9.8	- 3,103	20.8	-12.9	62.9
4 Maragheh	211,486	10.1	1,812	7.1	2,417	9.5	4,229	8.3	- 605	20.0	- 2.8	14.3
5 Meshkin-shahr	171,174	8.2	4,239	16.7	1,100	4.3	5,339	10.5	+ 3,139	31.1	+18.3	58.7
6 Mianeh	138,967	6.7	2,951	11.6	1,852	7.3	4,803	9.5	+ 1,099	34.5	+ 7.9	22.8
7 Hashtrud	140,953	6.7	495	1.9	368	1.4	863	1.7	+ 127	6.1	+ 0.9	14.7
8 Marand	111,451	5.3	1,635	6.4	1,619	6.4	3,254	6.4	+ 16	14.5	+ 0.1	0.5
9 Khalkhal	100,022	4.8	933	3.7	1,331	5.2	2,264	4.5	- 398	13.3	- 3.9	17.5
10 Sarab	132,064	6.3	1,583	6.2	2,461	9.7	4,044	8.0	- 878	18.6	- 6.6	21.7
Total	2,083,168	100.0	25,326	100.0	25,326	100.0	50,652	100.0	-	24.3		

Source: Table 6.1.

Table 6.6 : Total population, in-migrants, out-migrations, net migration, and migration rate by Shahrestan, East Azarbayejan, 1966

Shahrestan of origin and destination	Total population	%	In-migrant	%	Out-migrant	%	Total migrant	%	Net-migration	Gross migration rate per 1,000	Net migration rate per 1,000	Net migration as % of gross
1 Tabriz	809,426	31.2	35,994	55.3	9,614	14.7	45,608	35.0	+ 26,380	56.3	+ 32.6	57.8
2 Ardabil	296,376	11.4	3,789	5.8	5,768	8.8	9,557	7.3	- 1,979	32.2	- 6.7	20.7
3 Ahar	282,377	10.9	2,196	3.3	21.038	32.3	23,234	17.8	- 18,842	82.3	- 66.7	81.1
4 Maragheh	252,067	9.7	7,478	11.5	4,095	6.3	11,573	8.9	+ 3,383	45.9	+ 13.4	29.2
5 Meshkin-shahr	214,439	8.2	4,806	7.4	4,506	6.9	9,312	7.1	+ 300	43.4	+ 1.4	3.2
6 Mianeh	173,998	6.7	2,537	3.9	2,356	3.6	4,893	3.7	+ 181	28.1	+ 1.0	3.7
7 Hashtrud	164,486	6.3	1,563	2.4	2.431	3.7	3,994	3.0	- 868	24.3	- 5.3	21.7
8 Marand	153,195	5.9	4,187	6.4	4,513	6.9	8,700	6.7	- 326	56.8	- 2.1	3.7
9 Khalkhal	134,229	5.2	762	1.2	1,732	2.6	2,494	1.9	- 970	18.6	- 7.2	38.9
10 Sarab	115,846	4.5	1,784	2.7	9,043	13.9	10,827	8.3	- 7,259	93.5	- 62.7	67.0
Total	2,596,439*	100.0	65,096	100.0	65,096	100.0	13o,192	100.0	-	50.1	-	

* Unsettled population (population without a fixed residence) is not included

Source: Table 6.3

6.2.2 In-migration

In 1956, Tabriz Shahrestan, with 8,502 in-migrants, accounted for 33.6 per cent of the Ostan's total, followed by Meshkinshahr with 16.7 and Mianeh Shahrestan with 11.6 per cent. The remaining 7 Shahrestans accounted for 38.1 per cent of the Ostan's total. The number of in-migrants increased from 25,326 in 1956 to 65,096 in 1966. As in 1956, Tabriz Shahrestan received a large volume of in-migrants (35,994 or 55.3 per cent of the total), while the remaining 9 Shahrestans accounted for 44.7 per cent altogether. Among these 9 Shahrestans, Maragheh, with 7,478 or 11.5 per cent, had the highest percentage of in-migrants, followed by Meshkinshahr with 7.4 per cent and Ardabil with 5.8 per cent of total in-migrants. It should be pointed out that, except for Khalkhal Shahrestan, which showed a decrease in the number of its in-migrants, all the remaining 9 Shahrestans showed an increase in their in-migrants in a period of ten years (1956-1966). The number of intra-Ostan in-migrants to Tabriz Shahrestan increased from 8,502 in 1956 to 35,994 in 1966, an increase of more than 323.0 per cent.

6.2.3 Intra-Ostan out-migration

In 1956, with the exception of Hashtrud Shahrestan with 368 out-migrants, each Shahrestan had more than 1,000 out-migrants. Tabriz Shahrestan with 5,509 out-migrants accounted for 21.7 per cent of the Ostan's total, followed by Ardabil with 18.2 and Ahar with 16.0 per cent.

In 1966, Ahar Shahrestan was the main Shahrestan of out-migration in the Ostan, and alone accounted for more than 32.0 per cent of the Ostan's total. Its intra-Ostan out-migrants

increased from 4,051 in 1956 to 21,038 in 1966, while its 948 in-migrants in 1956 increased to 2,196 in 1966. Considering the differences between its in and out-migrants indicates the special situation of Ahar Shahrestan not only as an undisputed Shahrestan of intra-Ostan out-migration, but also as a main net losing Shahrestan in the Ostan. Among the remaining 9 Shahrestans, Sarab showed a notable increase in its out-migrants between 1956 and 1966. In fact it was due to this heavy out-migration that Sarab Shahrestan appeared as the second major net loser after Ahar in 1966.

6.2.4 Intra-Ostan gross migration

Tabriz Shahrestan had the highest percentage of the intra-Ostan gross migration in the Ostan both in 1956 and 1966 (27.6 and 35.0 per cent respectively). But in 1956 its in-migration was offset by out-migration to a greater extent compared to 1966. The proportion of in and out-migration in the gross movement clearly differed from Shahrestan to Shahrestan. For instance, in the case of Ahar Shahrestan the proportion of in-migration to gross was less than 19.0 per cent in 1966; thus the considerable size of its gross migration was due mainly to out-migration. Conversely, in Tabriz Shahrestan, in-migrants accounted for 35,994 or more than 78.0 per cent of the Shahrestan's gross migrants.

6.2.5 Net intra-Ostan migration

5 out of 10 Shahrestans experienced a net in-flow of intra-Ostan migrants in 1956. Surprisingly, Meshkinshahr with 3,139 net in-migrants took the first place in the Ostan in terms of net in-migration, and Tabriz Shahrestan with 2,993 net in-migrants came after Meshkinshahr, followed by Mianeh with 1,099 net in-migrants. Net in-migration of the remaining two gaining Shahrestans (Hashtrud, Marand) was negligible, (127 and 16 respectively). Among five losing Shahrestans, Ahar with 3,103 net loss, can be recognized as the main net loser, followed by Ardabil with 2,390 and Sarab with 878 net loss, while Maragheh and Khalkhal lost 506 and 398 migrants respectively. As a whole, there were considerable differences in the size of net migration between 1956 and 1966. For instance, net in-migrants of Tabriz Shahrestan increased from 2,993 in 1956 to 26,380 in 1966, (781.4 per cent increase over a period of 10 years). As a result of this considerable net in-migration, Tabriz Shahrestan took first place among the four gaining Shahrestans, followed by Maragheh with 3,383, Meshkinshahr with 300, and Mianeh with only 181 net in-migrants.

As can be understood from these figures, there were striking variations in the volume of net migration among the four gaining Shahrestans. In fact, Tabriz Shahrestan, with its dominance in attracting migrants, accounted for more than 87.0 per cent of net intra-Ostan in-migration and Maragheh, which was the next main gainer, accounted for only 11.1 per cent of net in-migrants, while the proportion of the remaining two gaining Shahrestans

(Meshkinshahr and Mianeh) was less than 2.0 per cent of the total net intra-Ostan in-migrants. This clearly shows the dominance of Tabriz Shahrestan in terms of attracting migrants from all over the Ostan in 1966. Figures 6.3 and 6.4 demonstrate the volume of net intra-Ostan migration in Tabriz Shahrestan in 1956 and 1966 respectively. Comparing Figure 6.3 with Figure 6.4 reveals the extent to which the number of net in-migrants of Tabriz Shahrestan increased during the 1956-1966 decade. Tables 6.7 and 6.8 show the volume of net inter-Shahrestan migration of Tabriz in 1956 and 1966 respectively.

Examining the situation of Shahrestans in terms of net intra-Ostan migration indicates that two Shahrestans (Hashtrud and Marand), which experienced a net gain in 1956, appeared as net losing Shahrestans in 1966. In contrast, Maragheh, which was one of the six losing Shahrestans in 1956, became the next major net gainer after Tabriz (with 3,383 net in-migrants) in 1966.

Among 6 Shahrestans which experienced a net intra-Ostan out-migration, Ahar with 18,842 or 62.3 per cent of the Ostan's total net out-migrants can be distinguished as a main net loser, followed by Sarab with 7,259 or 24.0 per cent and Ardabil with 1,979, 6.5 per cent of the total. The remaining 3 Shahrestans, being Hashtrud, Marand and Khalkhal, accounted for 7.0 per cent of the total net out-migrants.

Consideration of the volume of net in and out-migration of different Shahrestans reveals that the heaviest net losses can be seen among rural Shahrestans, that is, Shahrestans with a greater proportion of rural inhabitants. In this sense, Ahar Shahrestan was the striking example, both in 1956 and 1966. More than

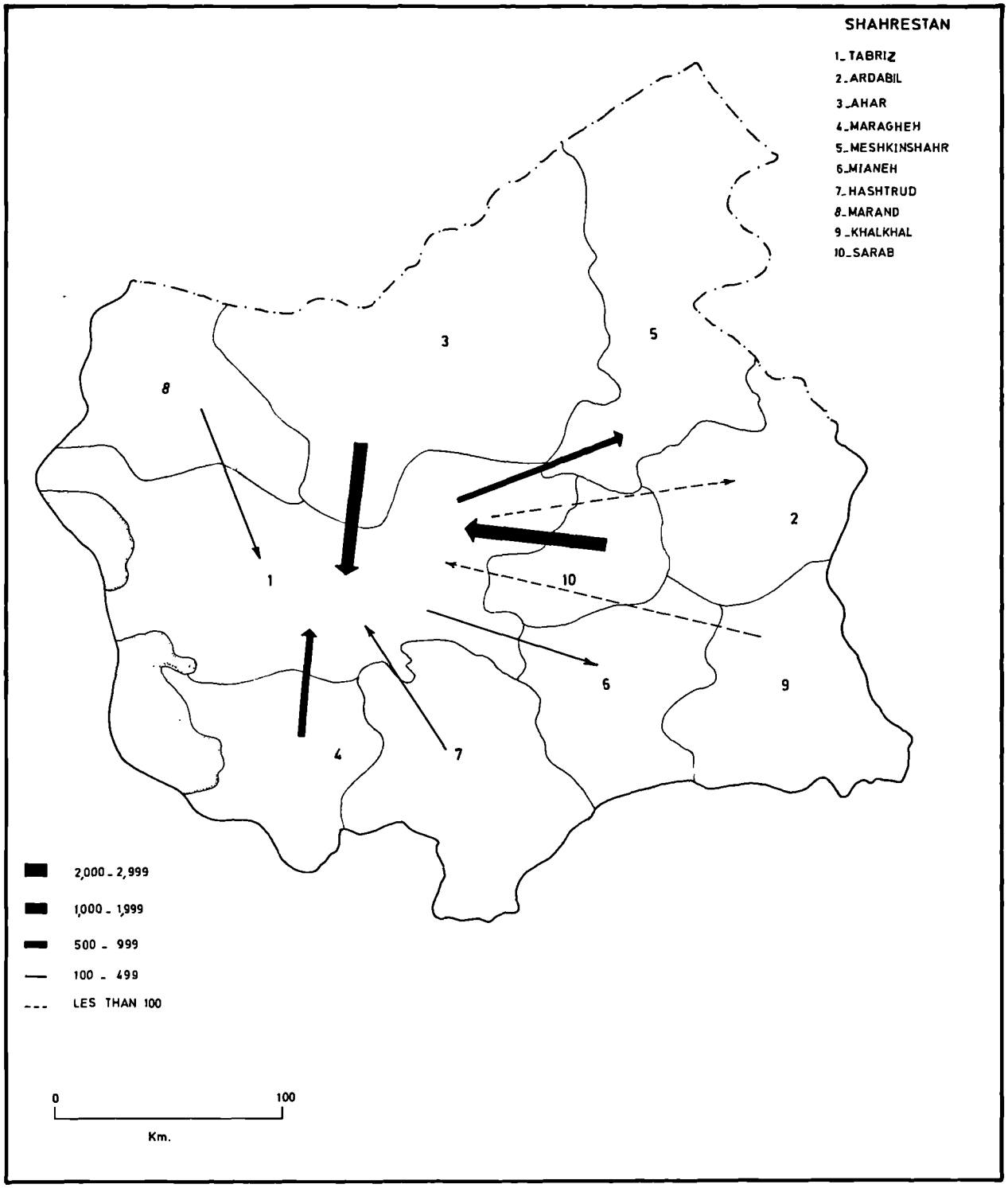

Figure 6.3 Net inter-Shahrestan migration of Tabriz Shahrestan, 1956.

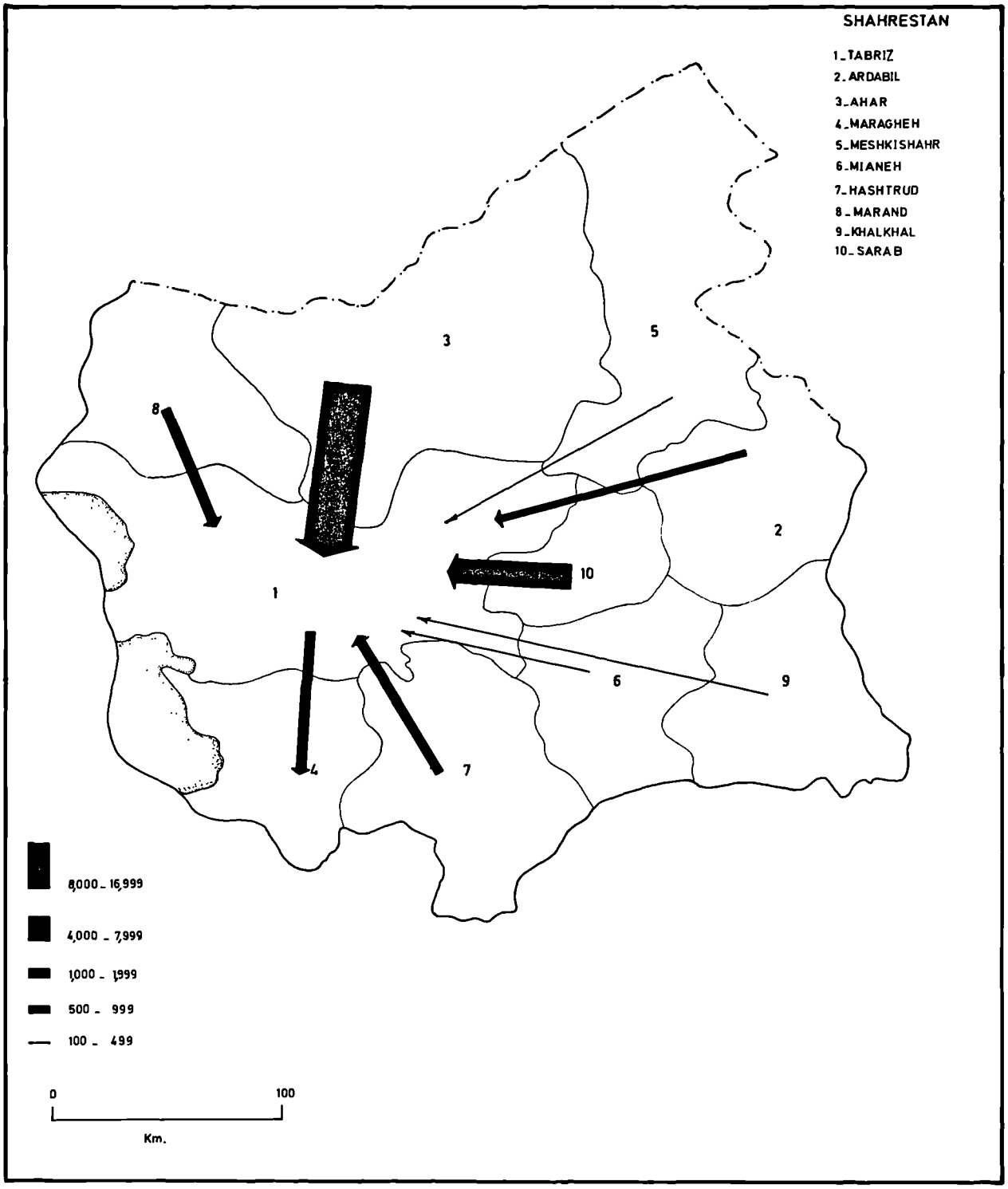

Figure 6.4 Net inter-Shahrestan migration of Tabriz Shahrestan, 1966.

Table 6.7 : In-migrants by Shahrestan of origin, out-migrants by Shahrestan of destination, and net inter-Shahrestan migration, Tabriz Shahrestan, 1956

Shahrestan of origin and destination	In-migrants	Out-migrants	Net migration
Ardabil	747	846	- 99
Ahar	2,993	369	+ 2,624
Maragheh	1,989	1,405	+ 584
Meshkinshahr	33	544	- 511
Mianeh	500	838	- 338
Hashtrud	147	0	+ 147
Marand	1,345	999	+ 346
Khalkhal	113	62	+ 51
Sarab	635	446	+ 189
Total	8,502	5,509	+ 2,993

Source : Table 6.1

Table 6.8 : In-migrants by Shahrestan of origin, out-migrants by Shahrestan of destination, and net inter-Shahrestan migration, Tabriz Shahrestan, 1966

Shahrestan of origin and destination	In-migrants	Out-migrants	Net migration
Ardabil	1,419	495	+ 924
Ahar	16,900	815	+ 16,085
Maragheh	2,580	3,732	- 1,152
Meshkinshahr	495	392	+ 103
Mianeh	946	542	+ 404
Hashtrud	1,575	395	+ 1,180
Marand	3,929	2,318	+ 1,611
Khalkhal	346	116	+ 230
Sarab	7,804	809	+ 6,995
Total	35,994	9,614	+ 26,380

Source : Table 6.3

89.0 per cent of the population of Ahar was rural and, as already stated, it was the main net loser in the Ostan. By contrast, Tabriz, two-thirds of whose population was urban, was the major net gainer as well. It may thus be concluded that the higher the level of urbanization of a Shahrestan, the larger the volume of net in-migrants.

This idea is clearly supported by the results of the calculation of the degree of the correlation between inter-Shahrestan migration rates and the proportion of the urban and rural population of the 10 Shahrestans of the East Azarbayejan Ostan. The calculation carried out based on the Spearman Rank Correlation Coefficient technique according to the following formula:

$$rho = 1 - \frac{6 \Sigma d^2}{n^3 - n}$$

where d is the difference in ranking and n is the number of cases.

As Figure 6.5 indicates, there was a significant positive correlation at the 99.0 per cent confidence level between inter-Shahrestan migration rates and the proportion of the urban population of the Shahrestans in East Azarbayejan (rho = 0.812).

Conversely, Figure 6.6 shows a significant negative correlation at the 99.0 per cent confidence level between inter-Shahrestan migration rates and the proportion of the rural population of the Shahrestans in East Azarbayejan (rho = -0.769).

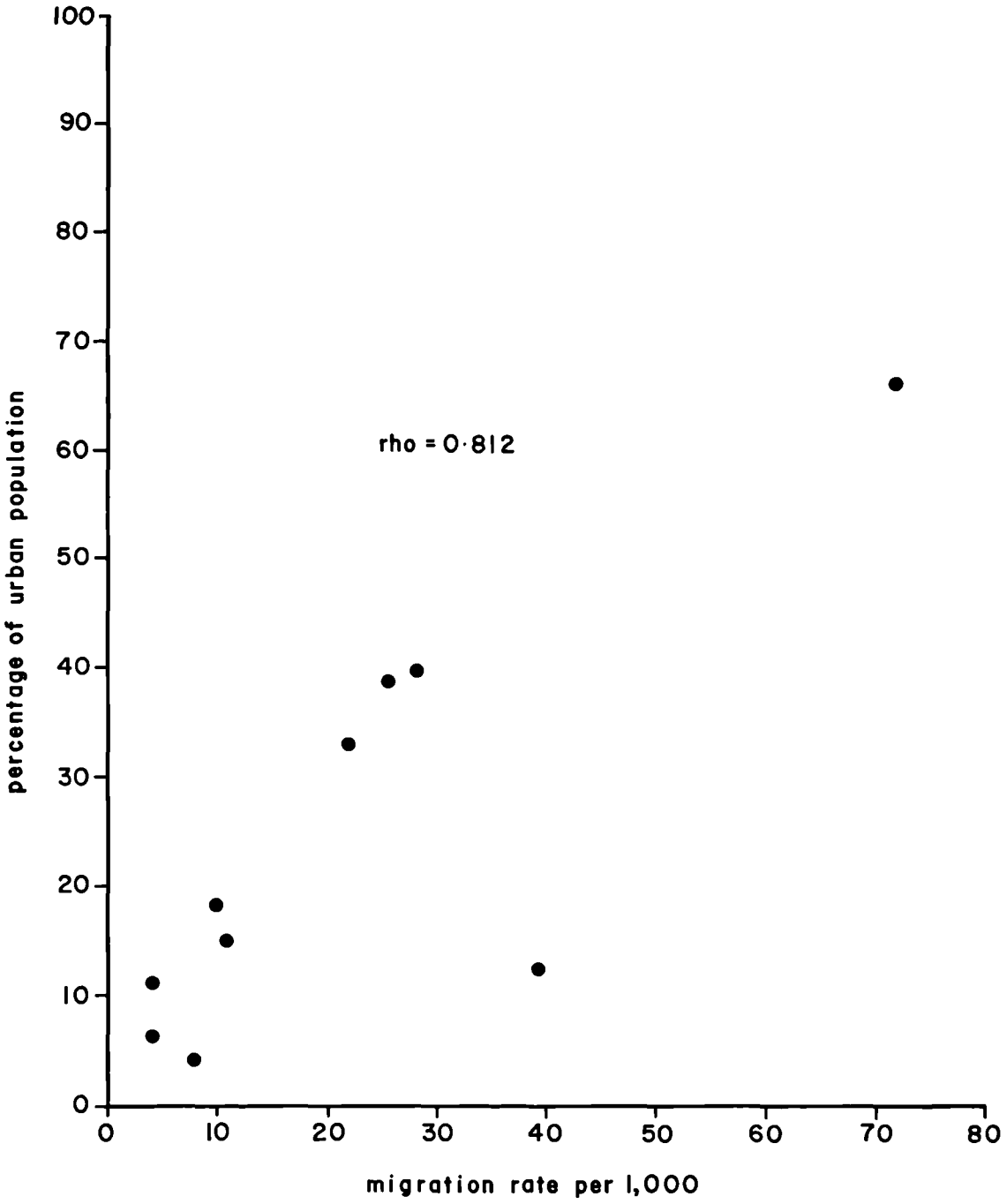

Figure 6.5 Correlation between the rate of inter-Shahrestan migration and the urban population of the Shahrestans of the East Azarbayejan Ostan.

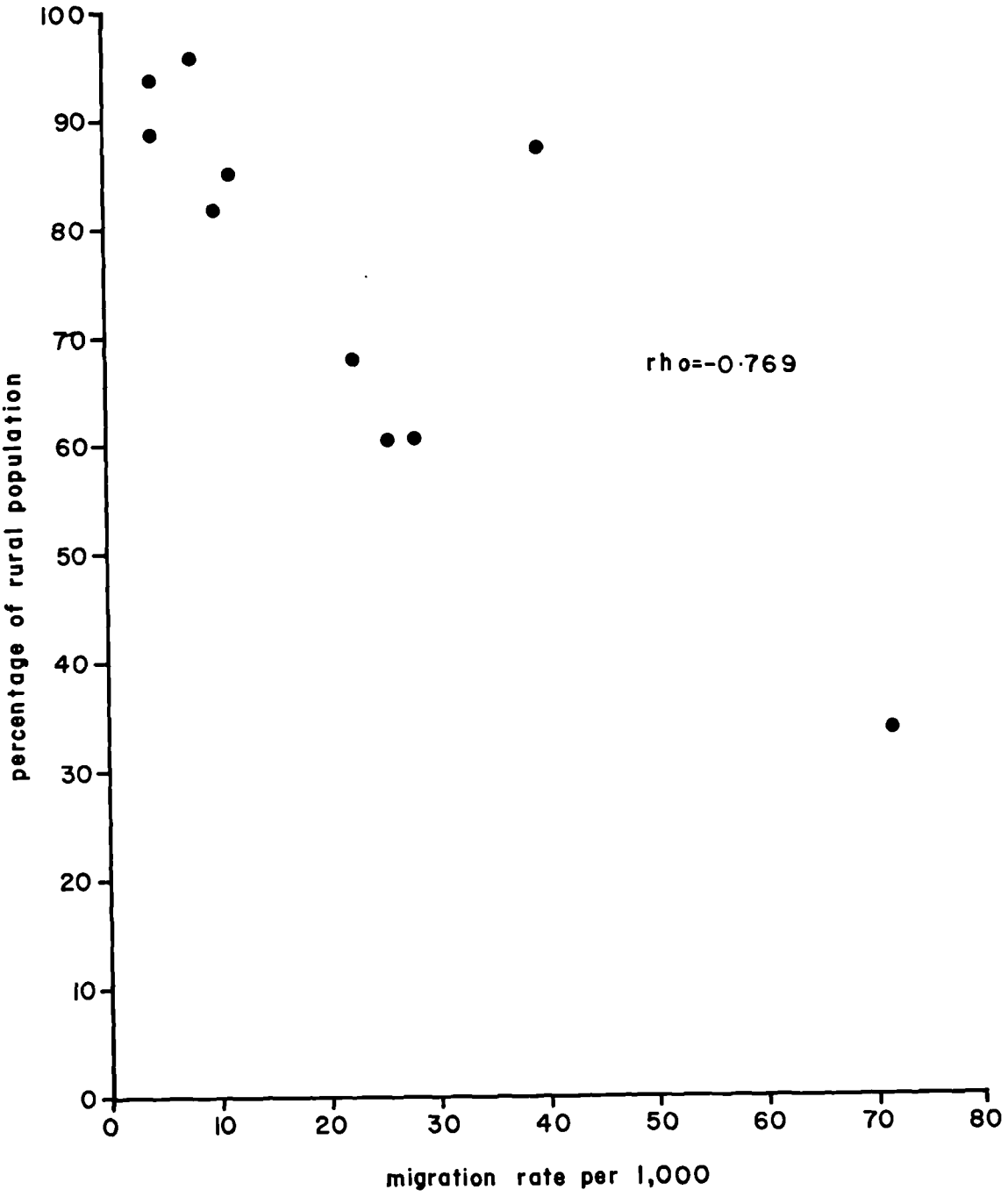

Figure 6.6 Correlation between the rate of inter-Shahrestan migration and the rural population of the Shahrestans of the East Azarbayejan Ostan.

6.2.6 Inter-Shahrestan migration rates

Tables 6.5 and 6.6 show the gross and net inter-Shahrestan migration rates in East Azarbayejan Ostan in 1956 and 1966 respectively. In 1956 the highest gross migration rate belonged to Mianeh Shahrestan (34.5 per 1,000); gross migration rates among the remaining 9 Shahrestans varied from 6.1 in Hashtrud to 31.1 in Meshkinshahr. In 1966, there were considerable increases in gross migration rates and Sarab Shahrestan, with 93.5 per 1,000, had the highest rate, followed by Ahar, 82.3 and Marand 56.8. In 1956, 5 out of 10 Shahrestans showed positive net migration rates. Meshkinshahr with +18.3 per 1,000 had the highest net migration rate, followed by Mianeh with +7.9 and Tabriz +5.2. Among 5 Shahrestans with negative net migration rates, Ahar had the highest (-12.9), followed by Ardabil with -9.1 and Sarab with -6.6.

In 1966, 4 Shahrestans had positive net migration rates. Tabriz with +32.6 per 1,000 showed the highest and Mianeh with a low +1.0 per 1,000 had the lowest positive net migration rate. In 1966, Ahar had the highest negative net migration rate (-66.7 per 1,000) among 6 losing Shahrestans, followed by Sarab with -62.7 and Khalkhal with -7.2 per 1,000.

6.2.7 Net intercensal migration, 1956 - 1966

Since data on the age distribution of migrants are not available, it is virtually impossible to estimate the survival ratios which are essential in the calculation of net intercensal migration. However, in order to give an estimate of net intercensal migration in East Azarbayejan, it is assumed that the

ten-year survival ratio of out-born persons is equal to that of in-born persons, and that both equal 0.82 (the overall census survival ratio for the Ostan between 1956 and 1966). This ratio may not measure the probability of survival very accurately, and there will be some error in the migration estimate, but it is certain that an estimate of net migration obtained by using even a roughly approximate survival ratio will be more accurate than one that ignores the mortality factor entirely. The estimation of net intercensal migration for the Shahrestans of East Azarbayejan Ostan, shown in Table 6.9, is calculated according to the method recommended in Methods of Measuring Internal Migration, (United Nations, 1970), using the overall census survival ratio of the Ostan between 1956 and 1966. The calculation indicates that Tabriz Shahrestan had a net gain of 23,926 which was composed of a net inward movement of 29,022 among persons born outside the Shahrestan and a net outward movement of 5,096 among persons born within the Shahrestan. Maragheh Shahrestan, on the other hand, showed a net in-migration of 5,992 persons born in other Shahrestans of the Ostan and a net out-migration of 2,113 persons born in Maragheh Shahrestan. The remaining 8 Shahrestans showed a net loss. Among these 8 Shahrestans, Ahar with a net loss of 16,298 ranked first, followed by Sarab with 6,539 and Meshkinshahr with 2,274 net loss. Figure 6.7 shows population change through net intercensal migration in the Shahrestans of East Azarbayejan between 1956 and 1966.

Table 6.9 : Estimated Net Intercensal Migration, East Azarbayejan Ostan, by Shahrestan, 1956-1966

SHAHRESTAN (1)	IN -MIGRANTS		OUT-MIGRANTS		NET-INTERCENSAL MIGRATION 1956-1966		
	1956 (2)	1966 (3)	1956 (4)	1966 (5)	Among out-born(6)	Among in-born (7)	Total (8)
Tabriz	8,502	35,994	5,509	9,614	29,022	- 5,096	+23,926
Ardabil	2,228	3,789	4,618	5,768	1,962	- 1,981	- 19
Ahar	948	2,196	4,051	21,038	1,418	-17,716	-16,298
Maragheh	1,812	7,478	2,417	4,095	5,992.	- 2,113	+ 3,879
Meshkinshahr	4,239	4,806	1,100	4,506	1,330	- 3,604	- 2,274
Mianeh	2,951	2,537	1,852	2,356	117	- 837	- 720
Hashtrud	495	1,563	368	2,431	1,157	- 2,129	- 972
Marand	1,635	4,187	1,619	4,513	2,846	- 3,185	- 339
Khalkhal	933	762	1,331	1,732	- 3	- 640	- 643
Sarab	1,583	1,784	2,461	9,043	485	- 7,024	- 6,539

Col. (6) = Col.(3) - 0.82 x Col. (2) ; Col. (7) = Col. (4) x 0.82 - Col.(5); Col.(8) = Col.(6) + Col. (7)

Source: Tables 6.5 and 6.6.

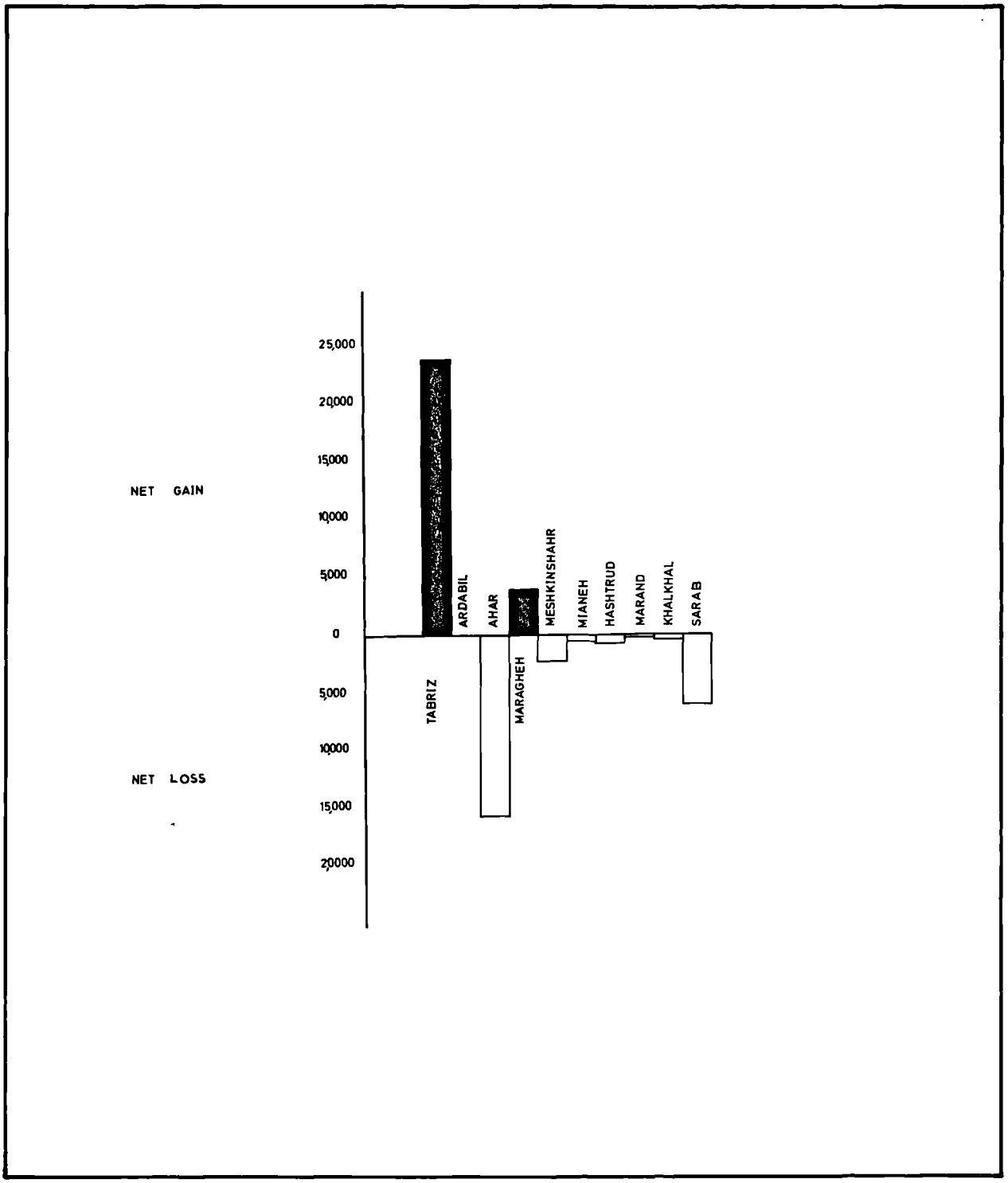

Figure 6.7 Population change through net inter-Shahrestan migration, East Azarbayejan Ostan, by Shahrestan, 1956-1966.

6.3 Comparison of the 1966 and 1976 migration data in East Azarbayejan Ostan

As stated earlier, the migration data published in 1976 are not comparable with those of the 1966 and 1956 censuses and it is impossible to produce a migration matrix which is essential in analysing inter-Shahrestan migration flows. The 1976 census gives the number of people born in other Shahrestans of the Ostan and enumerated in a given Shahrestan, in an aggregate form, thus the Shahrestan of birth of migrants within the Ostan is not stated. Consequently, examination of different features of inter-Shahrestan migration such as : in and out-migration, as well as net migration through the 1976 migration data is difficult. Therefore, due to these problems, the overall number of inter-Shahrestan migrants in 1966 and 1976, seems to be the only comparable feature of these two censuses in terms of intra-Ostan migration. In Tables 6.10 and 6.11, the population "born in other Shahrestans of the same Ostan" are inter-Shahrestan migrants. Comparing the total number of the population "born in other Shahrestans of the same Ostan", in 1976 with the similar data in 1966, for each Shahrestan in the Ostan, shows the extent to which the number of inter-Shahrestan migrants present in each Shahrestan changed during the intercensal period (1966-76). As Table 6.10 indicates, in 1966 the inter-Shahrestan migrants of the Ostan numbered 65,096,of which 35,993 (55.2 per cent) were attracted by Tabriz Shahrestan and the remaining 29,103 (44.8 per cent) were distributed between the other 9 Shahrestans. The proportion of the inter-Shahrestan migrants in the total population of Shahrestans varied from 0.8 per cent in Ahar to 4.4 in Tabriz Shahrestan. The proportion of inter-Shahrestan migrants

Table 6.10 : Birth-Place of the Population of East Azarbayejan Ostan by Shahrestan 1966

Shahrestan	Total Population	Born in Shahrestan of enumeration		Born in other Shahrestans of the same Ostan		Born in other Ostans		Born in Foreign Countries	
		No.	%	No.	%	No.	%	No.	%
Tabriz	809,426	758,975	93.8	35,993	4.4	13,027	1.8	1,431	0.2
Ardabil	296,376	289,988	97.8	3,789	1.3	2,121	0.7	478	0.2
Ahar	282,377	278,882	98.8	2,196	0.8	946	0.3	353	0.1
Maragheh	252,067	236,845	94.0	7,478	3.0	7,703	3.0	41	-
Meshkin-shahr	214,439	208,858	97.4	4,806	2.2	658	0.3	117	0.1
Mianeh	173,998	169,908	97.6	2,537	1.4	1,419	0.8	134	0.2
Hashtrud	164,486	161,772	98.4	1,563	1.0	1,163	0.7	14	-
Marand	153,195	146,589	95.7	4,188	2.7	2,336	1.5	82	0.1
Khalkhal	134,229	132,695	98.9	762	0.6	712	0.5	60	-
Sarab	115,846	111,965	96.6	1,784	1.5	2,029	1.7	68	-
Total	2,596,439	2,496,477	96.2	65,096	2.5	32,088	1.2	2,778	0.1

Source : Second National Census of Population and Housing, 1966, Vol. 41-50.

Table 6.11 : Birth Place of the Population of East Azarbayejan Ostan by Shahrestan 1976

Shahrestan	Total Population	Born in Shahrestan of enumeration		Born in other Shahrestans of the same Ostan		Born in other Ostans		Born in Foreign Countries	
		No.	%	No.	%	No.	%	No.	%
Tabriz	1,073,912	964,887	89.8	76,986	7.2	28,731	2.7	3,308	0.3
Ardabil	370,599	356,636	96.2	10,401	2.8	3,314	1.0	248	0.07
Ahar	296,997	293,828	98.9	1,313	0.4	1,628	0.5	228	0.07
Maragheh	309,321	286,083	92.5	7,939	2.6	15,136	4.9	163	0.05
Meshkin-shahr	301,663	287,304	95.2	11,993	4.0	1,900	0.6	466	0.2
Mianeh	200,233	195,711	97.7	2,133	0.7	2,266	1.1	123	0.06
Hashtrud	175,338	172,882	98.6	1,379	0.8	918	0.5	159	0.09
Marand	189,919	181,125	95.4	4,173	2.2	4,282	2.2	339	0.2
Khalkhal	157,171	155,554	99.0	659	0.2	912	0.6	46	0.03
Sarab	122,532	120,359	98.2	1,349	1.1	756	0.6	68	0.05
Total	3,197,685	3,014,369	94.3	118,325	3.7	59,843	1.9	5,148	0.1

Source : Third National Census of Population and Housing 1976, Vols. 31-41.

in the population of the 10 Shahrestans is shown in Figure 6.8. Comparing the number of inter-Shahrestan migrants of the Ostan in 1966 with that of 1976 (Table 6.11) indicates an increase of 53,229 (81.8 per cent) in the number of inter-Shahrestan migrants over a period of ten years. The percentage of inter-Shahrestan migrants in three Shahrestans (Tabriz, Ardabil and Maragheh) increased, and the remaining 7 Shahrestans showed a decrease in the percentage of their inter-Shahrestan migrants between 1966 and 1976. In 1976, Tabriz Shahrestan with 76,986 (65.0 per cent of the total) had the largest proportion of the inter-Shahrestan migrants in the Ostan, followed by Meshkinshahr (11,993 or 10.1 per cent), Ardabil with 10,401, (8.8 per cent) and Maragheh with 7,939 (6.7 per cent). The remaining 6 Shahrestans accounted for less than 10.0 per cent of the inter-Shahrestan migrants altogether. As can be seen from these figures, Tabriz Shahrestan maintained its dominance in attracting inter-Shahrestan migrants in the Ostan and, with an increase of 40,993 or 113.9 per cent between 1966 and 1976, doubled its inter-Shahrestan migrants, while in the same period the number of inter-Shahrestan migrants of the remaining 9 Shahrestans increased by only 12,236 (42.0 per cent). The proportion of inter-Shahrestan migrants in the total population by Shahrestan is shown in Figure 6.9.

Although data presented in Tables 6.10 and 6.11 show the number of inter-Shahrestan migrants in an aggregate form in the Shahrestans, changes in the percentage of inter-Shahrestan migrants between 1966-1976 suggest the following points.

1. The number of inter-Shahrestan migrants increased considerably between 1966 and 1976, compared with the preceding decade (1956-1966).

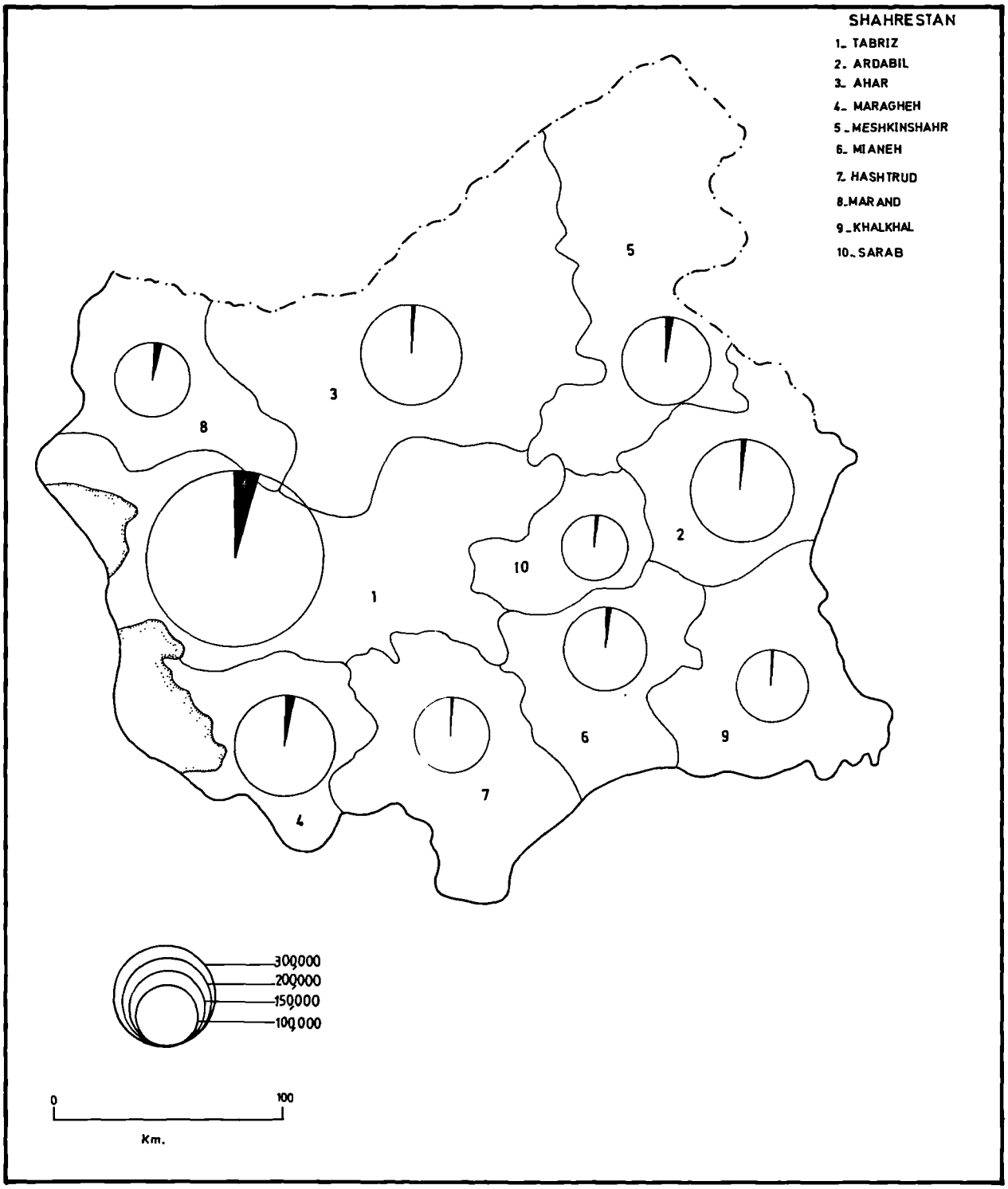

Figure 6.8 Proportion of inter-Shahrestan migrants to the total population, East Azarbayejan Ostan, by Shahrestan, 1966.

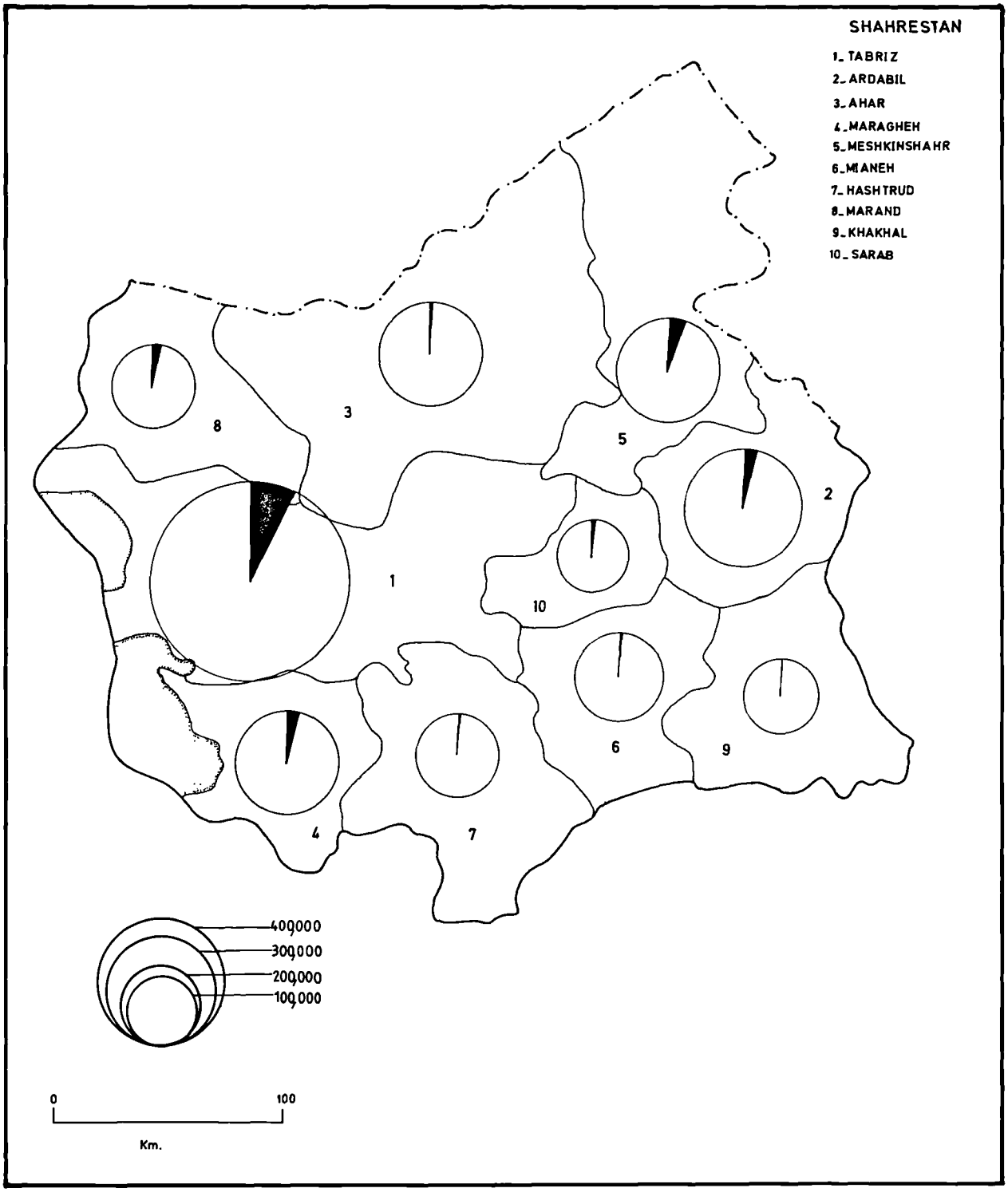

Figure 6.9 Proportion of inter-Shahrestan migrants in the total population, by Shahrestan, East Azarbayejan Ostan, 1976.

2. Tabriz Shahrestan maintained its position as the principal destination for inter-Shahrestan migrants in 1976. This was due mainly to the industrialization of Tabriz Shahrestan, in particular Tabriz City, which provided jobs for migrants, especially for unskilled and semi-skilled migrants who were easily absorbed in industries such as construction and carpet weaving. This may be explained by the fact that, since the majority of unskilled and semi-skilled migrants are unorganized labourers, they are usually willing to work long hours and take jobs that skilled and organized labour would not ordinarily accept. It is not surprising that the rate of employment among such labourers in the squatter areas of Tabriz appeared to be high (see Chapter 7). Moreover, the possibility of employment in construction activities plays a particularly important role in attracting the rural population to urban areas. It is a particularly important source of jobs for the unskilled farmer in Iran since the technique used for construction are generally not so advanced as to need long training.

Overall, as noted by Fisher (1978,309) nomadism, once extremely significant in Iranian life, is now in accelerated decline: many nomadic pastoralists have taken up a sedentary life either as a result of pressure by the government, or because of the "pull" exerted by the growing towns, where unskilled workers are now much in demand, this is certainly true of the Shahsavan tribes (see Chapter 7).

Thus, as noted by Clarke (1972, 83) there can be no doubt that the number of tribesmen practicing seasonal migration is declining either voluntarily or enforced by government. Increasingly the government's policy of only providing schools, health and

communal facilities to those tribesmen living in permanent settlements appears to be working. Indeed, many farmer tribesmen are spontaneously settling in villages and towns and buying land.

3. In addition to Tabriz Shahrestan, which doubled its inter-Shahrestan migrants during 1966-1976, two more Shahrestans (Ardabil and Meshkinshahr) showed a considerable increase in the size of their inter-Shahrestan migrants between 1966 and 1976. This was due mainly to the migration of tribes from the adjacent Shahrestans of Moghan and Ahar to these Shahrestans, who gave up their tribal life and settled in the urban and rural areas of Ardabil and Meshkinshahr Shahrestans.

4. Sarab, Khalkhal, Hashtrud, Mianeh and Ahar Shahrestans showed a decrease in the number of their inter-Shahrestan migrants between 1966 and 1976. This can be explained by the fact that the majority of the inhabitants of these Shahrestans is rural and their urban places, with rural characteristics and lacking the economic, social and educational facilities associated with larger urban centres provide no incentive for migrants looking for employment, better jobs and other urban facilities. For example, Hashtrud Shahrestan in 1976 had only one small town with less than 7,000 inhabitants which was the administrative centre of the Shahrestan.

As a result of the considerable differences in the economic, social and environmental conditions of these Shahrestans and other Shahrestans of the East Azarbayejan Ostan or other Ostans, there

have been continuous migration flows from these Shahrestans to the major urban areas of the Ostan, as well as to the other Ostans of Iran, particularly Central Ostan, in the recent 20 years.

In East Azarbayejan, city-ward migration has been a response to the positive social, economic and environmental features of the cities. Findings of the sample survey conducted in the squatter areas of Tabriz support this idea (see Chapter 7).

Migrants from rural areas of the Ostan usually move to urban centres with their families and settled down permanently, not only for better conditions of employment and higher incomes, but to seek better housing, educational and health facilities. Meanwhile, the concentration of social and economic services in the major urban centres of the Ostan, especially in Tabriz City, has provided a strong attraction for the rural-urban migrants of the East Azarbayejan.

Due to the rural-urban migration, the urban population of the Ostan experienced a considerable increase, particularly during the 1966-1976 decade (4.6 per cent per annum) while, despite the high fertility rates, the rate of increase in the rural population of the Ostan was far below the urban and even the Ostan's average during the 1966-1976 decade. (0.8 per cent per annum). For the same period the Ostan's rate of growth was 2.1 per cent per annum.

Table 6.12 shows the annual rate of growth for 17 urban places of East Azarbayejan in the 1956-1966 and 1966-1976 decades. These 17 places had 5,000 or more inhabitants as recorded in 1956, their number increased to 34 in 1976 (see Chapter 5). Since the contribution of the migrants from other Ostans in the growth of the urban population of the Ostan is negligible, it can be concluded that the increase in the population of the urban places is due to

natural increase and migration of people from rural areas of the Ostan, also the change in the administrative status of the places had some effects.

According to Table 6.12,in both the 1956 and 1966 and 1966-1976 decades, 11 out of the 17 urban places showed an annual rate of growth above the Ostan's average. Of particular interest was the high rate of growth of Tabriz City, the Ostan's capital and Ardabil, the second largest city in the Ostan, during the 1966-1976 decade, 4.0 and 5.7 per cent per annum respectively. This indicates the contribution of migrants from rural areas in the growth of the major cities ofthe Ostan.

6.4 Rural-urban migration in East Azarbayejan Ostan

Rural-urban migration is one of the most remarkable features of the East Azarbayejan Ostan. Rapid economic changes in the urban areas of the Ostan have influenced the development of labour movement and attracted considerable numbers of people from rural areas of the Ostan. A large number of villages have lost a number of their dwellers to the large urban areas, particularly Tabriz Shahrestan. Nevertheless, the largest migration is from the rural areas of Ahar Shahrestan in the north of the Ostan, where the socio-economic standard of cultivators is the lowest in the Ostan.

The largest urban district of the Ostan (namely Tabriz, the Ostan's capital) is the major destination for rural-urban migrants. Although Tabriz City has been, for a long time, the real magnet to the majority of people from the rural communities, the considerable increase in the population of Tabriz during the 1966-1976 decade and the expansion of the squatter areas in the northern and southern fringes of the city indicates the accelerated

Table 6.12 : Percentage Increase and Rate of Growth per Annum in Selected Towns and Cities of the East Azarbayejan Ostan 1956, 1966, 1976

City or Town	Population			Population change per cent		Rate of growth per cent per annum	
	1956	1966	1976	1956-1966	1966-1976	1956-1966	1966-1976
1 Tabriz	289,996	403,413	597,976	39.1	48.2	3.3	4.0
2 Ardabil	65,742	83,596	147,865	27.1	76.9	2.4	5.7
3 Maragheh	36,551	54,106	65,172	48.0	20.4	4.0	1.9
4 Mianeh	21.100	28,447	36,164	34.8	27.1	3.0	2.4
5 Ahar	19,816	24,063	32,098	21.4	33.4	2.0	2.9
6 Bonab	14,396	19,030	29,169	32.3	53.3	2.8	4.7
7 Marand	13,822	23,818	36,108	72.3	51.6	5.6	4.2
8 Sarab	13,086	17,063	18,361	30.4	7.6	2.7	0.7
9 Azarshahr	12,687	15,318	19,653	20.7	28.3	1.9	2.5
10 Osko	7,630	10,454	11,043	37.0	5.6	3.2	0.5
11 Meshkinshahr	7,221	8,990	14,568	24.4	62.0	2.2	4.9
12 Malekan	6,329	8,760	11,197	38.4	26.7	3.3	2.5
13 Mamaqan	6,156	7,290	8,590	18.4	17.8	1.7	1.6
14 Shabestar	5,441	6,228	6,724	14.5	7.9	1.4	0.8
15 Khalkhal	5,422	6,955	9,705	28.3	39.5	2.5	3.4
16 Khosrowshahr	5,362	5,937	7,647	10.7	28.8	1.0	2.6
17 Heris	5,166	5,870	6,849	13.6	16.7	1.3	1.5

Source: First National Census of Population and Housing, 1956, Vol.2.
Second National Census of Population and Housing, 1966, Vol.151.
Third National Census of Population and Housing, 1976, Vol.166.

pace of migration from rural areas of the Ostan to Tabriz City. It should be added that migrants in Ardabil City mainly came from rural areas within Ardabil Shahrestan and from rural areas of the adjacent Shahrestans of Khalkhal, Ahar and Meshkinshahr, while Tabriz City, with considerable economic, social and educational facilities, is the major destination for rural migrants from all over the Ostan.

6.4.1 Net intercensal rural-urban migration, 1966 - 1976

As stated earlier, data showing the volume of the rural-urban migration in Iran do not exist. However, in order to show the contribution of the rural-urban migration in the growth of the urban population of the East Azarbayejan Ostan, an attempt is made to estimate the net rural-urban migration for the 1966-1976 intercensal period using the CSR technique. According to this technique, the net rural-urban migration of the Ostan by age-group and sex is calculated and presented in Tables 6.13 and 6.14.

As Tables 6.13 and 6.14 show, in the 1966-1976 intercensal period the total net rural-urban migrants of the Ostan numbered 230,456, of which 132,613 (57.5 per cent) were males and 97,843 (42.5 per cent) were females, giving a sex ratio of 135.8 males per 100 females. Only in the 25-34 age-group did females outnumber males; all the remaining age-groups were dominated by males.

Overall, the figures in Table 6.13 and 6.14 suggest the following points:

1. Rural population of the Ostan showed a loss in all age-groups in favour of urban areas.

Table 6.13 : Estimated Net Rural-Urban Migration, 1966-1976, for the Male Population of East Azarbaeyejan, by Age, as of 1976

AGE GROUPS		URBAN Male population		TOTAL Male population		Estimated net rural urban migration
1966	1976	1966 (1)	1976 (2)	1966 (3)	1976 (4)	1966 - 76 (5)
0 - 4	10 - 14	60,857	85,091	262,810	215,499	35,189
5 - 9	15 - 19	60,656	78,456	222,478	163,478	33,885
10 - 14	20 - 24	49,747	51,680	150,706	106,297	16,592
15 - 24	25 - 34	68,736	67,725	192,088	160,078	10,443
25 - 34	35 - 44	48,704	62,717	169,975	162,402	16,183
35 - 44	45 - 54	45,466	55,292	162,540	153,378	12,389
45 - 54	55 - 64	24,818	24,280	76,071	60,428	4,565
55 - 64	65 - 74	18,224	12,959	60,976	36,083	2,175
65+	75+	16,362	8,378	57,035	23,830	2,175
All ages	10+	393,570	446,578	1,355,679	1,081,473	132,613

Col. (5) = Col. (2) - [Col.(4)/Col.(3)] .Col.(1)

Source: 1. Second National Census of Population and Housing 1966, Vol.151.
2. Third National Census of Population and Housing 1976, Vol.166.

Table 6.14 : Estimated Net Rural-Urban Migration, 1966-1976, for the Female Population of East Azarbayejan, by Age, as of 1976

AGE GROUPS		URBAN Female population		TOTAL Female population		Estimated net rural urban migration
1966	1976	1966 (1)	1976 (2)	1966 (3)	1976 (4)	1966 - 76 (5)
0 - 4	10 - 14	58,396	74,611	229,183	194,087	25,157
5 - 9	15 - 19	57,842	64,106	205,841	157,804	19,762
10 - 14	20 - 24	44,754	48,526	133,677	125,787	6,413
15 - 24	25 - 34	59,168	66,174	196,198	177,201	12,735
25 - 34	35 - 44	48,265	59,282	171,075	156,098	15,242
35 - 44	45 - 54	41,181	47,575	134,973	123,983	9,747
45 - 54	55 - 64	22,303	20,463	63,920	48,050	3,697
55 - 64	65 - 74	17,820	11,659	56,988	30,480	2,128
65+	75+	12,159	6,372	48,905	18,254	1,834
All ages	10+	361,888	398,768	1,240,760	1,031,744	97,843

Col.(5) = Col.(2) - [Col. (4)/Col.(3)] .Col.(1)

Source: 1. Second National Census of Population and Housing, 1966, Vol.151.
2. Third National Census of Population and Housing, 1976, Vol.166.

2. Rural-urban migrants in the 10-14 age-group formed the highest proportion of all rural-urban migrants and accounted for 35,189 (26.5 per cent) of the males and 25,157 (27.7 per cent) of the female migrants.

3. 52.0 per cent of the males and 45.9 per cent of the female rural-urban migrants were aged between 10 and 19 and the persons aged 20-54 accounted for 41.9 per cent of the male migrants and 45.1 per cent of the female migrants. This indicates that migrants of working age moved to urban areas with their families.

4. Among rural-urban migrants, persons 55 years of age and over accounted for only 6.7 per cent of the males and 7.8 per cent of the female migrants. Thus, it can be concluded that the rural-urban migration was more common among young and adult inhabitants of rural areas while older people seemed to be less mobile and usually did not leave their home villages for urban areas.

5. Overall, the rural-urban migration in East Azarbayejan was dominated by males of working age who were usually accompanied by their families.

6.5 Sex and age structure of inter-Shahrestan migrants and non-migrants in East Azarbayejan Ostan

Analysis of data on sex and age of the inter-Shahrestan migrants indicates the extent to which migration is a selective process, even within a relatively small study area like an Ostan.

Of a total of 65,096 inter-Shahrestan migrants in 1966, 37,431 (57.5 per cent) were males and 27,665 (42.5 per cent) females, giving

a ratio of 135 males per 100 females. In 1976, inter-Shahrestan migrants of the Ostan numbered 118,325 of whom 62,210 (52.6 per cent) were males and 52,115 (47.4 per cent) females, with a ratio of 119.4 males per 100 females. As Tables 6.15 and 6.16 indicate, in the all age groups the number of male migrants was greater than females. Particularly in some age-groups like, 15-19 and 20-24 in both 1966 and 1976, the proportion of males was considerably larger than females, simply because of migration of males of working age. In 1966, male migrants in the 20-24 age-group were the highest percentage of the total male migrants (7,514 or 20.0 per cent), followed by the age-group of 25-29 (9.1 per cent), while the 55-59 age-group showed the lowest percentage of male migrants (1.7). There has been a decrease in the percentage of male migrants in the age-group of 20-24 in 1976, and unlike 1966, the age-group of 15-19, had the highest percentage of male migrants among all age-groups (14.2 per cent). In 1976, the lowest percentage of male migrants belonged to the 60-64 age-group (2.0 per cent).

In 1966, female migrants were distributed more evenly between age-groups compared to the 1976. In 1966, the age-group of 5-9 had the largest proportion of female migrants (2,924, 10.6 per cent), while in 1976, the 20-24 age group with 6,312 or 12.1 per cent had the highest percentage of the total female migrants.

Comparing Table 6.15 with Table 6.16, shows an increase in the number of inter-Shahrestan migrants in all age-groups, for both sexes during the intercensal period (1966-76) and, as noted earlier, inter-Shahrestan migration in East Azarbayejan Ostan was clearly dominated by males, particularly adults of

Table 6.15 : Inter-Shahrestan Migrants by Sex and Age, East Azarbayejan Ostan, 1966

Age-group	Male	%	Female	%	Both Sexes	%
0 - 4	+ 2,634	7.0	2,332	8.4	4,966	7.6
5 - 9	+ 3,462	9.2	2,924	10.6	6,286	9.6
10 - 14	3,226	8.6	2,612	9.4	5,838	9.0
15 - 19	2,717	7.2	2,661	9.6	5,378	8.3
20 - 24	7,514	20.0	2,818	10.2	10,222	15.7
25 - 29	3,428	9.1	2,741	9.9	6,169	9.5
30 - 34	3,199	8.5	2,644	9.6	5,843	9.0
35 - 39	2,885	7.7	2,329	8.4	5,214	8.0
40 - 44	2,638	7.0	1,839	6.6	4,477	6.8
45 - 49	1,535	4.1	964	3.5	2,499	3.8
50 - 54	960	2.5	950	3.4	1,910	2.9
55 - 59	638	1.7	601	2.2	1,239	1.9
60 - 64	1,062	2.8	987	3.6	2,049	3.1
65+	1,523	4.0	1,263	4.6	2,796	4.3
Total	37,431	100.0	27,665	100.0	65,096	100.0

Source: Second National Census of Population and Housing 1966, Vol.151.

Table 6.16 : Inter-Shahrestan Migrants by Sex and Age, East Azarbayejan Ostan, 1976

Age-group	Male	%	Female	%	Both Sexes	%
0 - 4	3,779	6.0	3,389	6.5	7,168	6.0
5 - 9	6,534	10.5	5,593	10.7	12,127	10.2
10 - 14	6,601	10.6	5,172	9.9	11,773	9.9
15 - 19	8,823	14.2	5,975	11.5	14,798	12.5
20 - 24	8,291	13.3	6,312	12.1	14,603	12.3
25 - 29	5,391	8.7	4,956	9.5	10,347	8.7
30 - 34	4,864	7.8	3,976	7.6	8,840	7.5
35 - 39	4,648	7.5	3,787	7.3	8,435	7.1
40 - 44	4,593	7.4	3,529	6.8	8,122	6.7
45 - 49	4,054	6.5	3,044	5.8	7,098	6.0
50 - 54	3,408	5.5	2,344	4.5	5,752	4.8
55 - 59	1,563	2.5	1,078	2.0	2,641	2.2
60 - 64	1,240	2.0	1,044	2.0	2.284	1.9
65+	2,421	3.9	1,916	3.7	4,337	3.7
Total	62,210	100.0	52,115	100.0	118,325	100.0

Source: Third National Census of Population and Housing, 1976, Vol.166.

working age, both in 1966 and 1976.

As Table 6.17 shows, in 1966, of a total of 2,496,477 non-migrants in East Azarbayejan 1,297,436 (52.0 per cent) were males and 1,199,041 (48.0 per cent) were females giving a sex ratio of 108.2 males per 100 females. Comparing the sex ratios of non-migrants with those of the migrants (135 males per 100 females in 1966), clearly shows the extent to which the inter-Shahrestan migration was dominated by males.

According to Table 6.18, the non-migrants of the Ostan numbered 3,014,369 of whom 1,546, 561 (51.3 per cent) were males and 1,467,808 (48.7 per cent) were females, with a ratio of 105.3 males per 100 females. Although the sex ratio for inter-Shahrestan migrants was higher than that of the non-migrants in 1976, (119.4), sex ratios both for migrants and non-migrants were lower as compared with those of 1966. Both in 1966 and 1976, the non-migrants in the 0-4 age-group had the highest proportion of the total non-migrants (484,021 or 19.4 per cent and 537,248 or 17.1 per cent respectively). The case differed for the inter-Shahrestan migrants when in 1966 the 20-24 age-group and in 1976 the 15-19 age-group showed the highest proportion of the inter-Shahrestan migrants.

In 1966, the 20-24 age-group showed the highest proportion of migrants to non-migrants (6.5 per cent) while the 0-4 age-group showed the lowest proportion of the migrants to non-migrants (1.0 per cent). The proportion of migrants to non-migrants for the remaining age-groups ranged from 1.5 per cent in the 5-9 age-group to 3.8 per cent in the 25-29 age-group.

Table 6.17 : Non-migrants by Sex and Age, East Azarbayejan Ostan, 1966

Age-group	Male	%	Female	%	Both sexes	%
0 - 4	258,599	19.9	225,422	18.8	484,021	19.4
5 - 9	217,125	16.7	201,034	16.7	418,159	16.7
10 - 14	145,764	11.2	129,422	10.8	275,186	11.0
15 - 19	102,420	7.9	100,825	8.4	204,245	8.2
20 - 24	70,711	5.4	87,032	7.2	157,743	6.3
25 - 29	77,989	6.0	84,205	7.0	162,194	6.5
30 - 34	81,892	6.3	78,953	6.6	160,845	6.4
35 - 39	79,761	6.1	68,822	5.7	148,583	5.9
40 - 44	74,710	5.7	60,164	5.0	134,874	5.4
45 - 49	42,475	3.3	31,204	2.6	73,679	2.9
50 - 54	30,217	2.3	30,058	2.5	60,275	2.4
55 - 59	22,404	1.7	21,008	1.7	43,412	1.7
60 - 64	36,385	2.8	33,757	2.8	70,142	2.8
65+	55,984	4.3	47,135	3.9	103,119	4.1
Total	1,297,436	100.0	1,199,041	100.0	2,496,477	100.0

Source : Second National Census of Population and Housing, 1966, Vol.151.

Table 6.18 : Non-migrants by Sex and Age, East Azarbayejan Ostan, 1976

Age group	Male	%	Female	%	Both sexes	%
0 - 4	285,132	18.4	252,116	17.2	537,248	17.8
5 - 9	271,305	17.5	244,926	16.7	516,231	17.1
10 - 14	206,038	13.3	186,340	12.7	392,378	13.0
15 - 19	146,390	9.5	148,979	10.1	295,369	9.8
20 - 24	86,452	5.6	115,937	7.9	202,389	6.7
25 - 29	76,053	4.9	88,487	6.0	164,540	5.4
30 - 34	67,656	4.3	75,799	5.2	143,455	4.7
35 - 39	71,043	4.6	73,818	5.0	144,861	4.8
40 - 44	78,891	5.1	72,912	4.9	151,803	5.0
45 - 49	74,782	4.7	63,086	4.3	137,868	4.6
50 - 54	69,216	4.5	54,053	3.7	123,269	4.0
55 - 59	32,089	2.0	22,590	1.5	54,679	1.8
60 - 64	24,832	1.6	22,742	1.5	47,574	1.6
65+	56,682	3.7	46,023	3.1	102,705	3.4
Total	1,546,561	100.0	1,467,808	100.0	3,014,369	100.0

Source : Third National Census of Population and Housing, 1976, Vol.166.

In 1976, in all the age-groups the proportion of migrants to non-migrants showed an increase and the highest proportion of migrants to non-migrants, as in 1966, was in the 20-24 age-group (7.2 per cent) and the lowest proportion of migrants to non-migrants, also as in 1966, was in the 0-4 age-group (1.3 per cent). In the remaining age-groups the proportion of migrants to non-migrants ranged from 2.3 per cent in the 5-9 age-group to 6.2 per cent in the 25-29 age-group.

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CHAPTER 7

SQUATTER SETTLEMENTS OF TABRIZ

7.1 Introduction

Squatter settlement may be defined as a concentration of dwellings built on land which is neither owned nor rented by the builders (squatters) (Johnston, 1981, 323). Terms such as transitional, uncontrolled, sub-integrated, marginal, provisional, spontaneous and unconventional have been used in the literature to define this type of settlement (Kazemi, 1980, 46). Squatter settlements appear under a variety of names reflecting the local culture and the specific circumstances of their establishment : gecekondu, "built overnight" (Turkey); favela (Brazil); barriadas (Peru); villa miseria (Argentina); ciudades asilas or ciudades de refugio (Colombia); colonias prolearias (Mexico); corralones, pubelos javenes (Peru); barriadas brujas (Panama); poblaciones callampas, "mushroom population or settlements" (Chile); cantegriles (Uruguay); rancheros or conqueros (Venezuela); barrios de los probers (Ecuador); and barrios piratas and arrabales elsewhere in Latin America; bustee or basti (Calcutta - Delhi); chawls (Bombay); ahatas (Kampar); cheris (Madras); sarifa (Baghdad - Iraq); berraka and nouala (Morocco); bidonville (Algeria - Morocco); gourbivilles (Tunisia) (Karpat, 1976, 11).

In Iran, squatter settlements are known as hashiah neshin;* however, in this study, the terms "squatters" and "squatter settlements" will be used.

Squatter settlements dominate urban growth in many parts of Latin America, Asia and Africa, where squatters may constitute as much as 80 per cent of the population of some urban centres. Movements to squatter settlements take place from traditional inner city dwellings,

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* In Persian language, hashiah, means "fringe" and neshin means "to settle".

as well as from rural areas and are compounded by high rates of natural increase (Johnston, 1981, 323).

As Abrams (1979, 293) writes, the squatting problem exists in many parts of Asia, Latin America, and Africa - in fact, wherever there has been a mass movement of people to cities with an insufficient building stock. For example, in 1964 there were 240,000 squatter units (gecekondu) in Turkey (Abrams,1979,293). According to a survey carried out in the early 1960s, 64 per cent of the dwellings in Ankara, 48 per cent in Adana, about 40 per cent in Istanbul, Iskenderun and Erzurum and 24 per cent in Izmir qualified as gecekondu units. Of the total city population, gecekondu inhabitants constituted 59.22 per cent in Ankara, 45 per cent in Istanbul, 44.95 per cent in Adana, and 33.42 in Izmir. The proportion has steadily increased over the past two decades (Karpat, 1976, 11).

Squatter settlements contain a high proportion of the total urban population in the majority of the world's developing countries. In 1951, squatters numbered 60,000 in Baghdad and 20,000, in Basra, Iraq; in Karachi, squatters represented about a third of the population. Squatters account for at least 20 per cent of Manila's population, and in Davao, squatters have taken possession of the whole parkway area running from the city hall to the retail centre. In Venezuela, the proportion of squatters (rural and urban) is more than 65 per cent of the total population, with a 35 per cent rate for Caracas and 50 per cent for Maracaibo. Cali, Colombia, has a squatter population that makes up about 30 per cent of the total figure. In Santiago, Chile, squatters represent an estimated 25 per cent of the population. They constitute 15 per cent in Singapore and 12 per cent in Kingston, Jamaica (Abrams, 1979, 294).

The squatter settlements inhabited mainly by people of rural origin are one of the products of the process of rural-urban migration and urbanization in many developing countries in the Third World (Banifatemeh, 1982, 17). Harrison (1979, 161) has pointed out that squatter areas in the Third World are growing even more rapidly than the booming cities which they surround. The United Nations Secretariat has estimated that squatter settlements are growing at an average of 15 per cent a year, nearly four times faster than the overall city growth rate. For example, Ankara grew at 5.3 per cent a year between 1960 and 1970, while its squatter areas grew at 12.6 per cent. Mexico City grew at 2.8 per cent a year between 1952 and 1966, but its shanties spread nearly ten times as fast. Lima's population increased by 9 per cent a year in the twelve years from 1957, while the barriadas mushroomed at 64 per cent (Harrison, 1979, 161). It has been estimated that by 1990 three quarters of Lima's population will be living in shanty towns (Lloyd, 1979, 20).

Discussing the role of squatters in the expansion of the Third World cities, Harrison (1979,161) notes that, in most cities, the major part of the increase in total population occurred in the underprivileged squatter settlements. These now house more than two-fifths of the population of the major Third World cities, but in many places much more than that : they contain 46 per cent of Mexico City's population, 70 per cent of Casablanca's and Quagadougou's, 80 per cent of Douala's and 90 per cent of Addis Ababa's. He concludes that no city in the world, however rich, could build modern houses, pave roads, dig sewers, lay water pipes and electricity cables rapidly enough to cope with this population growth. And these are not rich cities. The flood of immigrants bursts all the barriers of planning and legislation.

The manner in which squatters take possession of land, plan and build their dwellings and eventually expand them is strikingly similar across many Third World countries. The immediate cause prompting such action is the shortage of housing, coupled with high rentals in the city proper. This situation is aggravated by the lack of a satisfactory government housing policy, which may stem from lack of social concern, inadequate planning experience or, most often, from investment priorities that favour industrialization and defence rather than social welfare. In addition to the similarities exhibited by the squatters in terms of the act of land invasion, planning, building and the expansion of settlements, there are also similarities in the economic status and occupations of the squatters, their sense of community and the mutual assistance networks which they establish. At the same time, there are differences between the squatter settlements of the various Third World countries as regards, for example, the particular set of conditions in rural areas leading to migration, the time the settlement was formed, and the rate of industrial growth characterizing the cities. An outstanding element of similarity among the squatter settlements across the Third World is the high rate of home ownership. As will be discussed later, in Tabriz, 97.3 per cent of the sampled household heads own their house or shack; as Banifatemeh (1982, 89) has noted, comparable ownership figures were 84 per cent in Istanbul and 81 per cent in Monterrey. Furthermore, in Caracas, the percentage of home owners ranged between 81 and 93 per cent. In Rabat's shanty towns, 75 to 90 per cent of the dwellers owned their baraques.

The literature indicates that squatter dwellings almost everywhere expand in a more or less similar manner. Usually new units are added to the original room, especially after the deed to the land has been legally acquired, and thus shacks often become true houses. The physical shape of

squatter dwellings and the materials used show great variation from country to country (Banifatemeh, 1982, 90).

Squatter settlements are usually, though not exclusively, inhabited mainly by migrants from villages and rural areas, and therefore represent a strategic group for studies of the transformation of rural populations into urban ones. Discussing the reasons for rural-urban migration, which is the main cause in the formation of squatter settlements of the Third World countries, Lloyd (1979, 21) has pointed out that, throughout the Third World, the development of agriculture has lagged far behind that of other economic sectors, the apparent breakthrough with fertilizers, new high-yielding strains and the like being of limited or dubious success. The opportunities which seem to exist in the city far outweigh those apparent in the rural area. In addition, men are being forced off the land in many places. Thus, most of the squatters come to the major cities from the rural areas in developing countries. Therefore, squatter settlements appear as the by-product of rapid economic development and industrialization. Squatter settlements should not be confused with the slums in the industrially developed nations or in Third World cities. A slum is usually regarded as a thickly populated area marked by wretched living conditions (Banifatemeh, 1982,17) and slums are not confined to squatter districts.

Turner (1969, 514) has viewed squatter settlements in the light of four hypotheses : first as a manifestation of normal urban growth under historically abnormal conditions; second, as vehicles for social change; third, as the product of the difference between the popular demand for housing and that demanded and supplied by institutional society, and fourth, as a phenomenon that could be controlled by the encouragement of popular initiative through the government servicing of local resources. Thus, it is clear that rural migration into cities in the Third World

results in squatter settlements that are as a whole part of a total process of social change, in the form of urbanization and modernization.

The outstanding features of squatter settlements seem to be, first, that they are found in nearly all the cities of Third World countries, and, secondly, that they have strong similarities in terms of their evolution and their relations with the city to which they are attached.

7.2 Squatter settlement in Iran

In Iran, rural-urban migration, particularly after the land reform of 1963, led to a rapid growth in squatter settlement. As Hill (1973, 7) has noted, one example how the government of Iran was seemingly encouraging rural development, but in fact was also concomitantly encouraging a quickening rate of rural to urban migration has been the case of the Land Reform programme.

Before land reform (1963), all the villages were characterized by large land-holdings which involved three types of property ownership : private ownership, mosque ownership, and state ownership. Three types of private landholders could be distinguished, namely, the large landholders, the medium landholders, and the petty landholders. Alongside the landholders, there was a large population of peasants, village middlemen, and landless agricultural labourers. The big landholders, i.e. those with more than five villages each, owned a total of 19,000 villages in Iran (38.0 per cent of the total). This category contained thirty seven families. The medium landholders, i.e. those with between one and five villages, owned a total of 7,000 villages (14.0 per cent of the total). The petty landholders, i.e. those with less than one village each owned about 15,000 villages (30.0 per cent of the total). Almost all of these three types of landholders were absentee landholders. Religious institutions owned a total of 6,000 endowed villages

(12.0 per cent). Finally, the state itself owned over 3,000 villages (6.0 per cent) (Banifatemeh, 1982, 37). Before land reform the total number of peasant families was 1.8 million (59.0 per cent of all rural families). Only seven per cent (130,000 families) of the 1.8 million families (4.0 per cent of all rural families) owned their own land, which averaged about three hectares each. The remainder (93.0 per cent of 1.8 million families or 55.0 per cent of all rural people) did not own land but had only the right to cultivate it. Traditionally, they were called Nasagh* holders. The village middlemen were those who indirectly participated in production. They did not own the land, the means of production, and they were shopkeepers and other occupational groups related to farming. Finally, the traditional agricultural labourers were those who worked on the land for Nasagh holders for a return in kind. In the traditional classification of the rural population, village middlemen and traditional agricultural labourers formed a stratum called Khosh neshin. This group comprised 1.25 million families (41.0 per cent of all rural families (see Chapter 3). The middlemen families formed a relatively small proportion of the Khosh neshins (their numbers did not exceed a few hundred thousand persons).

Through the implementation of land reform (1963), half of the rural population acquired land while the other half did not. Indeed, the latter lost even the partial access to cultivation and working rights which they had possessed before Land Reform. Along with the creation of a new rural propertied class came the creation of a new landless class, with nothing to sell but their labour power. Consequently, land reform created and rearranged rural classes and strata in relation to

* Nasagh is rules of common law governing use of land and water in irrigated and non-irrigated arable lands. Those peasants who have Nasagh rights on arable lands are Nasagh holders.

property in the form of land. Only 570,000 families received enough land, which along with 130,000 previously better-off peasants became a total of 700,000 well-off peasant families. Over one million peasant families joined pre-reform rural agricultural labourers because of the insufficiency and undesirability of the land allocated to them. It was particularly during the second stage of the land reform (1963-1965) that, as Lambton (1969, 222) notes, the gap between the peasants to whom land was transferred under the first stage and those who had not received land was broadened. Under the first stage there had been surprisingly little envy and discontent between the two groups perhaps because the peasants who had not received land under the first stage assumed that their turn would come under the second stage. As it became clear to the peasants that they were not going to get land in the same way as their fellows had under the first stage, envy and discontent grew. Thus, the pre-reform agricultural labourer remained landless. Overall, the polarization of the rural population became apparent. On the one hand, a minority of well-to-do peasants (700,000 families), and, on the other, a majority of poor peasants with less than one hectare of land, and finally the landless agricultural labourers.

The agricultural labourers found themselves in a situation of growing destitution. Unemployment or underemployment became even more of a common feature in their lives. Statistics compiled by the Iranian government for 1971 indicate a rural unemployment rate of 13.9 per cent for the economically active population. Hence, pressure to leave the rural areas for the cities where, at least from a distance, subsistence life seemed possible increased daily. In a classic case of push factors at the point of origin, the Iranian agricultural proletariat migrated in droves to cities far and near (Kazemi, 1980, 42).

Furthermore, an abrupt fall in world prices for Iranian agricultural products depressed the already low standard of living of many rural areas. Thus, the decline in agricultural productivity which affected income levels in rural areas and the attraction of urban employment opportunities may be considered as the essential factors in propensity to migrate. Simultaneously the government stressed the development of industries to supply the internal market. The resultant increase in factory employment created a concomitant demand for a labour force.

Aside from the basic push factors due to the multifaceted problems in agriculture, a number of other reasons such as the wide gap and perceived differences between rural and urban incomes contributed to the peasants' decision to migrate to the cities. As Kazemi (1980,42) indicates, in 1972 the average earned income per day from agricultural work was only $1.40 for male and 74 cents for female labourers. An unskilled construction worker in the urban areas for the same year earned several times this amount. On the basis of this fact, some agricultural workers decided to become part of the urban rather than the rural proletariat. The expansion in urban construction during the mid-1970s absorbed a portion of unskilled rural migrants and probably contributed to the continuing influx of rural workers to the city. It should be added here that migration was not restricted to the agricultural proletariat alone. Other groups of the landless Khosh neshin population, particularly those involved in the rapidly declining handicraft and non-farming occupations, joined the migratory movements (see Chapter 3). Furthermore, segments of the cultivating peasantry, whose land was either purchased by the agribusiness companies or exchanged for paper shares in farm corporations, found it more congenial to make the move to the city. Even for some of the new peasant farmers and middle-sized farm operators who remained behind, the uncertainty about their land

titles created a sense of insecurity and contributed to slow but steady flight from the countryside (Kazemi, 1980, 42). Finally, as Fisher (1983, 313) has pointed out, many of the nomadic tribesmen who have had a great influence on the life of Iran and are found in all the mountain zones, moved into towns as the economy developed, though there are still some remaining. These events were parallelled by, and probably contributed to, a rapid rise in construction costs and land values. Housing became scarce and expensive. On arrival in the city, as Lloyd (1979, 23) has pointed out, the migrant's most urgent needs are accommodation and work. New migrants searching for homes were joined by many city dwellers no longer able to afford the rents in inner urban areas. Squatting on hillsides around the central areas of cities, with the dual advantage of being rent free and located close to the centre, became the best solution for many. Consequently, they invaded land on the outskirts of the city which was without benefit of public services and built their own crudely constructed houses.

There has been no official data or survey which shows the number of people who live in slums or squatter settlements in Iran. But there are unconfirmed estimates about the number of squatters or slum dwellers. There are also some sporadic studies conducted either by individual researchers or governmental institutions. This lack of information and the scarcity of researches may be attributed to political factors during past and present governmental administrations. The study carried out by Kazemi (1980) may be considered as one of the most comprehensive studies on the situation of the poor migrants who, as he says, left the rural areas of Iran, primarily because of the dislocation in the agricultural sector, and settled in squatter settlements, slums and low-income communities of Tehran. It should be mentioned here that, as Costello (1977, 49) has noted, Tehran does not have any readily

identifiable shanty towns, although the city is a major attraction for migrants from all over Iran. The newcomers have been absorbed into the rapidly expanding fabric of the city. The majority of the poorer sort, however, have settled in the southern districts, which are on the desert fringes and furthest from the cooler mountains to the north.

As stated earlier, investigation in the situation of the poor migrants living in southern districts of Tehran forms the major part of Kazemi's study. Special emphasis is placed on the migrants' family background, literacy and education, living conditions before and after migration, ties and relations in Tehran, employment and work situation in Tehran and their sociopolitical awareness. This study also contains a brief discussion on the situation of rural-urban migrants in Tabriz City. Unfortunately, apart from Kazemi's study, there have been very few empirical studies on the rural-urban migration which can be considered as the main cause of the development of the squatter settlements of major cities in Iran. Moreover, while squatting - a vast and visible consequence of urbanization - has been the subject of investigation in many other developing countries (Jones and Eyles, 1977, 210), this important issue has been neglected in many cases relating to urban planning in Iran.

In Iran, the establishment and formation of squatter settlements is not unique to Tabriz; most of the major cities, and particularly the Ostan capitals such as Shiraz, Ahvaz and Kermanshah (Bakhtaran), as well as the satellite cities of Tehran such as Karaj have experienced the establishment and expansion of squatter settlements over the past twenty years. Even medium-sized cities such as Bandar-e-Abbas, the capital of Hormozgan Ostan in the south of Iran have experienced the expansion of squatter settlements in recent years. According to Niroomand and Ahsan (1972,23) in 1971, of the 48,338 inhabitants of

Bandar-e-Abbas 11,246 or 23 per cent were squatters living mainly in the western and southern fringes of the city. Thus, in Iran, as in many other developing countries, squatter settlements have become a common feature of most major cities in recent years. Considering the rapid expansion of the squatter settlements and their effects on the development of the urban areas, it might be accepted that the success of any planning programme in urban areas of the Third World countries depends to a great extent on a full understanding of the nature of the squatter settlements.

7.2.1 Geographic and political characteristics of Tabriz

Tabriz, with a current population of 834,685 (1984) is the fourth largest city in Iran and one of its former capitals. It lies in a valley to the north of the long ridge of Mount Sahand. This valley opens up into a plain that slopes down gently to the north and to Lake Urumiah, forty-two miles to the west. It is located at an elevation of 4,600 ft. (1400 m.). The nearest points on the Soviet and Turkish frontiers are, respectively, 60 and 100 miles from the city. Owing to its proximity to Russia and Turkey, as well as to the fact that it is in an earthquake zone, Tabriz had a very eventful history. Its name has been held to refer to the thermal springs which are numerous in the locality; or, as the name in modern Persian indicates, to its good air ("fever-dispelling"). Tabriz may date from early Sasanid times (c. third or fourth century A.D.) or, more likely, from the seventh century A.D. (Fisher, 1968, 14).

Tabriz was probably taken by the Arabs about A.D. 642 but, then and for long after merely a small town, it was completely overshadowed by the much larger and more important cities of Ardabil and Maragheh (two cities located in East Azarbayejan Ostan) (Banifatemeh, 1982, 43).

In A.D. 858, in the reign of Mutavakkil, the tenth Abbasid Caliph, the city was almost completely destroyed by an earthquake. In A.D. 1041 Tabriz was again levelled by an earthquake (Ludwig, 1976,630).

When the Mongols overran Iran in 1220-21, their armies twice appeared before the walls of Tabriz, but on each occasion they were induced to spare the city by the prompt payment of a large ransom. Not long afterwards, however, it fell into their hands. Later in the century, Hulagu Khan, the first of the Mongol rulers of Iran, made Maragheh his capital, so that Tabriz was once again relegated to a subordinate position.

In 1501, Shah Isma'il, the first of the Safavi rulers of Iran, occupied Tabriz, where he was crowned; soon afterwards, he made the city his capital in place of Ardabil. At that time the population of Tabriz was between 200,000 and 300,000 (Lockhart, 1960, 10).

In 1721, Tabriz was again in large part destroyed by an earthquake and 80,000 persons perished (Ludwig, 1976, 630).

In 1827, in the course of the two disastrous wars between Iran and Russia in the early part of the nineteenth century, the Russian forces captured Tabriz. The city was, however, restored to Iran by the Treaty of Turkamanchai which was concluded in the following year (Banifatemeh, 1982, 44).

In 1905, Tabriz was chosen as the capital of the heir apparent. In June 1908, the constitutional revolution against the Shah started at Tabriz, and was kept alive by the stubborn resistance this city offered to the royalists. The arrival of Russian troops in April 1909, nominally in order to save Russian subjects from famine, put an end to the fighting, and marked the commencement of a Russian occupation of Azarbayejan, which continued without interruption until 1912.

Situated in the extreme north-west of Iran, in the open countryside from which relatively easy routes reach the Caspian central lowlands, Russia, eastern Anatolia, and the Black Sea coastlands, Tabriz has developed considerably over the last century and a half as a military centre. By no means surprising in view of its location, it has been occupied since 1800, once by the Turks and several times by the Russians, the last of these occasions being as recently as 1947-8 (Fisher, 1968,14).

During the Second World War, Tabriz was occupied by Soviet troops. Although under a treaty obligation to withdraw from Iran within six months of the conclusion of the state of hostilities with Germany and her allies, the Soviet troops remained in Tabriz and other occupied parts of Azarbayejan for some months after the stipulated period. When they left, Tabriz was under the control of the Democrats, led by Pishavari who proclaimed the Azarbayejan separatist movement in the Autumn of 1945 (Greaves, 1977, 60). However, the short-lived Azarbayejan Republic collapsed upon the entry of Iranian military forces in December 1946 and the Democrats were driven from Tabriz.

As the capital of East Azarbayejan Ostan, with continuing cultural and political links with both Russia and Turkey, Tabriz has for long been renowned as highly politicized with numerous advanced and radical groups (Fisher, 1968, 16).

7.2.2 Industrialization and the expansion of squatter settlements in Tabriz

Tabriz is one of the most industrialized cities in Iran, with a wide range of fabricating industries, including textiles, a tractor factory, car manufacturers (car engines), a cigarette company, chemical products, paper, construction materials, household appliances (heaters, Samovars), plastic and foods (see Chapter 4). Parallel to its military and strategic significance, Tabriz has importance as an exchange centre, since it handles

a good deal of the trade involving countries to the north and west of Iran. Carpets, agricultural and pastoral products (especially dried fruit), Caspian fish, and machinery from Europe are marketed, either via Russia or the Black Sea ports of Turkey. Furthermore, as the regional market and administrative centre for one of the most densely populated parts of Iran, Tabriz has important local trading and manufacturing interests, especially in carpets and to a lesser degree in leather. The city is the hub of a transportation and communications network, various local and government services, financial interests and education. These industries have added to the economic well-being of the city and have also served to stimulate an influx of potential labourers into the city and surrounding areas, a characteristic feature of large cities in developing countries.

A number of local, national and international developments contributed to the urbanization of Tabriz. Railroads to Tehran, to the Soviet Union via Jolfa and to Turkey increased its importance as a centre of transportation and communication. It should be mentioned that a link between the Iranian and the Turkish railways (the CENTO link) was opened in September 1971. It is also worth noting that the railroad network has been the most fundamental factor in the modern growth of the city. There are also other factors involved in the industrialization process in Tabriz such as favourable state laws granting certain tax exemptions to industries, availability of foreign and local capital for investment, and the existence of Tabriz University with several educational institutions and professional training centres which have attracted students from all over the country.

Rapid industrialization has created a demand for an industrial labour force and stimulated large-scale movement of the rural population to Tabriz in search of work and a higher standard of living than that

afforded by the villages. This was reinforced by the implementation of land reform and later by the establishment of farm corporations which, as Hooglund (1982, 86) has shown, did nothing for peasant welfare. Only a small proportion of the peasants who had formerly cultivated the land were employed in farm corporations, and as a result migration from villages to the towns was increased. Most of the migrants from villages and rural areas are unskilled and have difficulty finding employment, thus adding to the already acute problem of unemployment and under-employment in the city. Another group of migrants to Tabriz city consists of semi-skilled workers from the smaller towns within East Azarbayejan Ostan. In addition to the peasants and migrants from smaller towns, tribesmen, gradually giving up their nomadic life, have migrated to Tabriz in increasing numbers. The migration of tribesmen to urban areas was stimulated by the policy of settling tribes which was announced in 1974. In addition to Tabriz city, cities such as Ardabil and Meshkinshahr have attracted a considerable number of the Shahsavan tribesmen who are mostly settled in the outskirts of these cities, together with other rural-urban migrants. As a result, the pastoral products have decreased and a large number of tribesmen have become a part of consuming population of the urban areas. It is most likely that in the near future nomadism, which was once the way of life of a considerable number of the inhabitants of the northern part of East Azarbayejan will be fully abandoned. Reasons for this are many and sometimes difficult to explain in detail. Disputes between farmers and tribesmen over grazing land, the establishment of the Moghan agribusiness company which occupies a vast area

of grazing lands formerly used by tribes and the pull factors of the urban areas may be distinguished among many other reasons which have created the present situation.

Overall, in Iran, there has been a reduction in the number of tribal nomads as a result of the tribal policy of Reza Shah. As Clark (1972, 82) has pointed out, during his reign Reza Shah attempted to destroy tribal organization, to prevent seasonal migration and to convert the tribal nomads into agriculturalists. Reza Shah considered that the existence of nomadic groups was an anachronism in his policy of modernization. Keddie (1981, 168) notes that Mohammad Reza Shah, like his father, in fact pursued a policy of settling nomads - not by force of arms but by depriving them of their livelihood so that they had increasingly to become agriculturalists or to enter the subproletariat of the urban slums. The nationalization of pasture, one of the points added to the White Revolution, took away tribal control of pastureland and made the tribes increasingly subject to governmental whims and policies enforced by the gendarmes. In the 1970s especially, the government became increasingly convinced, partly persuaded by American businessmen, that instead of relying on the nomad's sheep for much of Iran's meat the government should underwrite the creation of large meat, poultry, and dairy farms, with expensive imported equipment, cattle and feed. As in the case of peasant farms, the regime felt, that nomadism was not "modern", whereas big American-style animal farms were; and wealthy Iranians and Americans profited from the latter. Thus, a way of life which ordinary people had developed in order to make maximum use of marginal resources, and which could survive with tested modifications,

was increasingly sacrificed to a wholesale use of inappropriate modern Western imports (Keddie, 1981, 168).

The most critical urban problems in developing countries are evident among newcomers to urban areas, the in-migrants. Typically, such newcomers locate in the cheapest and least desirable places to live, often in shanty towns as squatters. This is true of the squatter settlements in Tabriz. While the city proper is growing very rapidly and lags in the provision of adequate city services, its surrounding suburbs and squatter settlements are growing much faster than the city itself. The fundamental cause of this growth can be found in the historical process of rural-urban migration during the last 30 years.

7.3 The study of squatter settlement of Tabriz

7.3.1 Objectives

The main objective of this section is to study the demographic and socio-economic characteristics of the population of the squatter settlements of Tabriz. Given that these settlements are primarily the product of rural-urban migration, an attempt is made to examine the reasons for migration and the consequences of this movement in both the areas of origin (rural areas) and at the destination (Tabriz City). In order to acquire a better picture of the demographic characteristics of the squatters of Tabriz, their reasons for squatting, housing patterns, level of literacy, economic and occupational structure will be analysed. Furthermore, in order to show that the establishment and formation of the squatter settlements of Tabriz is similar to those in different parts of the world, an attempt will be made to compare the findings of this study with the findings of similar studies elsewhere in the world where possible. Finally, some suggestions for improving the living conditions of the squatters and a few comments on the control of rural-urban migration will be made.

7.3.2 The study area

The major areas of squatter settlement lie on the northern and southern fringes of the city (Figure 7.1). These areas have been the least desirable for development by business, industry and housing projects mainly because of the terrain and their peripheral location. There are considerable differences between these two areas in terms of their physical geography. The northern area, which is occupied mainly by migrants from rural areas of Ahar and other Shahrestans in the north of the Ostan has developed at the foot of the northern mountains of Tabriz (Own-ebne-ali), and exhibits the characteristics of a hill-side village rather than a real urban area. The majority of the dwelling units in this area are built along the valley which leads to the Aji-Chai river. In contrast, the squatter settlements of the southern fringe have been established and expanded in a plain region immediately beyond the city's huge and old cemetry called Imamia. This area has been occupied mainly by migrants from rural areas of southern Shahrestans of the Ostan such as Maragheh and Hashtrud. The dwelling units of the southern area are relatively regularly arranged compared to those in the northern area where high lands and valleys have created serious difficulties in the construction of houses and regular streets or lanes.

In Tabriz, as in many other Third World cities, migrants, on their arrival in the city, were faced with high rentals and a shortage of housing in the city proper. As a result they have invaded these formerly uninhabited areas and built their own houses. It should be remembered that the lands occupied by squatters of Tabriz were uncultivable, unsuitable for major urban planning projects and had no established ownership. Furthermore, since the time of occupation there has been no social and governmental action in connection with the protection of these lands.

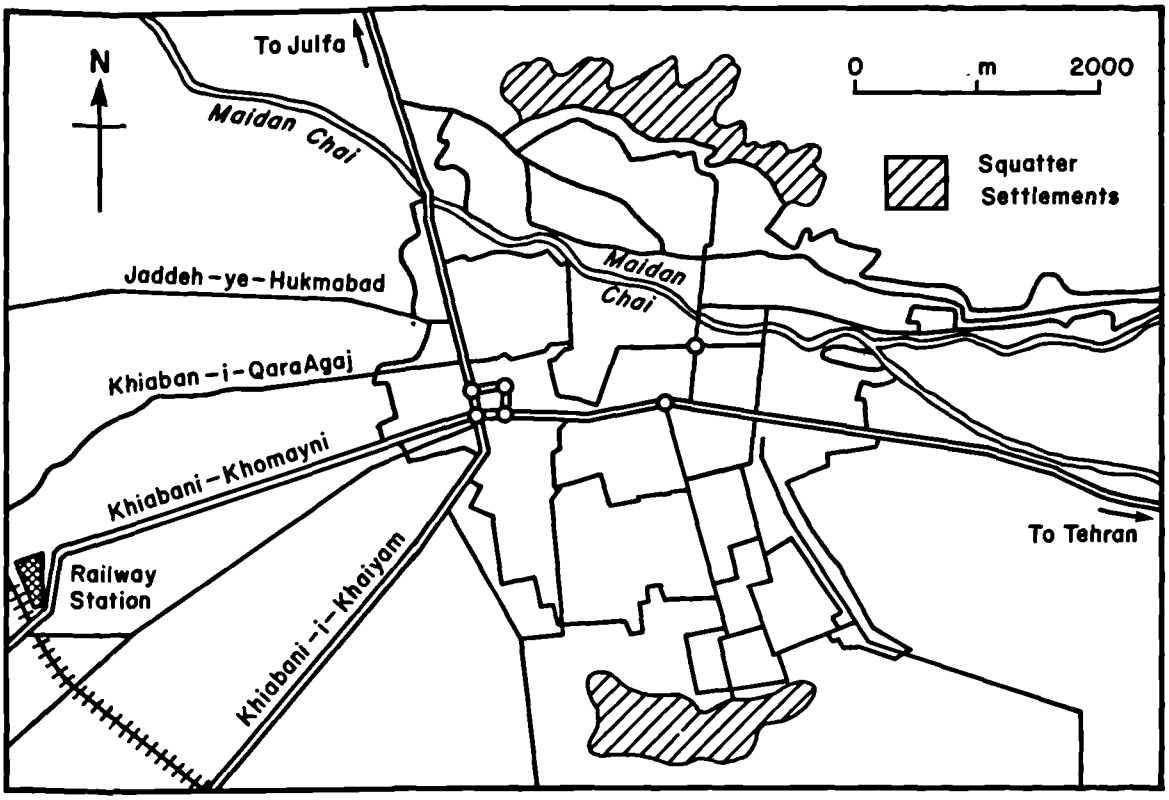

Figure 7.1 Squatter areas of Tabriz City.

There are considerable differences between Tabriz City and these areas in terms of housing patterns, public city services such as running water, electricity, transportation and so forth. The sheer dominance of inhabitants with rural characteristics has given a special character to the squatter settlements. The great majority of inhabitants in these areas have constructed their own houses, typically alone or with family help. Official data which would allow a historical reconstruction of squatter settlements in the areas are not at present available. However, according to the information collected from the oldest household in the squatter areas of Tabriz, the first squatter settlement appears to have been constructed about 1945. Between 1945 and 1960, squatter settlements developed only slowly. It was after the land reform of 1963 that, due mainly to the influx of rural migrants, the area expanded at an accelerating pace (see Chapter 5). Survey data indicate that the majority of households have moved to the squatter settlements during the last 20 years (Table 7.1). Thus, it can be realized that, in the period 1945 to 1965, the squatting was less organized, on a small scale, and not as widespread as in recent years.

7.3.3 Method of survey

According to estimates made by the Statistical Centre of Iran, in 1977, there were 7,574 squatter households in Tabriz, located mainly in the northern and southern fringes of the city. Taking into consideration that the number of squatter households in Tabriz was estimated at approximately 8,500 in 1982, the following procedure was used in the selection of the sample. Since the number of the squatter households in the northern fringes of Tabriz appeared to be larger than that of the southern fringe, the northern area was divided into four divisions and southern area into three. 15 per cent of the squatter households in each division were randomly selected. The total number

Table 7.1 : Time of arrival of households in squatter settlements, Tabriz, 1982

Years ago	No. of household	Percent
less than 5	319	25.0
5 - 10	491	38.5
10 - 15	258	20.2
15 - 20	74	5.8
20 - 25	60	4.7
25 - 30	32	2.5
30 - 35	26	2.0
35 - 40	9	0.7
more than 40	4	0.3
not stated	2	0.15
Total	1,275	100.0

Source : Fieldwork.

Table 7.2 : Number of Household heads by sex, squatter settlement, Tabriz

Household Heads	Number	Percent
Male	1,251	98.1
Female	24	11.9
Total	1,275	100.0

Source : Fieldwork.

of households selected from all 7 divisions was 1,275.

The questionnaire (Appendix A) was prepared on the basis of the demographic, social, economic and environmental characteristics of the squatter settlements and consisted of 26 items dealing with the occupational skill level, reasons for migration, housing patterns, home ownership, level of income, and level of literacy of the squatters. In the preparation of the questionnaire, in addition to personal familiarity and an interest in the study of squatter settlements and the study areas, several factors such as consultation with experts in the statistical centre of the Ostan and the consideration of the similar questionnaires used elsewhere, in Banda-e-Abbas and Tehran for example, have played a great part.

The definition of terms used in the questionnaire followed the definitions made by the Statistical Centre of Iran.

In the summer of 1982, interviews were conducted and questionnaires filled in with the assistance of 21 students of the Department of Geography, University of Tabriz. It should be added that these 21 students (four of them female) were trained and given uniform and specific instruction regarding the goals and conduct of the interview.

Since there has been no official map or plan for the squatter areas of Tabriz, a sketch map of the study areas showing the seven divisions of the sample survey was prepared. In each division questionnaires were filled in by three interviewers. The author was available throughout the survey in the study area. At the end of each working day the administered questionnaires were checked carefully. It is worth noting that there were no major difficulties experienced by the interviewers during the survey, and the squatters showed a considerable contribution in giving responses to the interviewing staff. Furthermore, since all interviews were from Tabriz and were familiar with the study areas

and since all could speak Azari Turki (the local language) they could easily attract the confidence of the squatters. In some cases the squatters eagerly asked the aims of the survey and after that, in addition to the scheduled interview, they made a variety of suggestions in connection with the improvement of their settlements and living conditions.

7.4 Data analysis

7.4.1 Demographic characteristics of the sampled squatter settlements of Tabriz

Of the 1,275 sampled household heads 1,251 or 98.1 per cent were males and only 24 or 1.9 per cent were females (Table 7.2). The number of the household members ranged from 1 to 14 persons. The total number of the inhabitants living in the 1,275 sampled households, was 7.508. Thus, the mean number living in a household was 5.9, significantly higher than the mean number for the urban (5.3) and rural(5.7) areas of the Ostan. It should be added here that the mean number living in a household in Tabriz City was 5.0. Households with 4-6 members had the highest percentage (44.8) among household categories (Table 7.3). It should be remembered that, the term "household" refers to all persons living together in one dwelling unit, sharing their living expenses and eating toether regardless of their relationship to the household head.

7.4.2 Sex and age structure of the sampled households

Of the total of 7,508 inhabitants living in the 1,275 sampled households, 3,957 (52.7 per cent) were males and 3,551 (47.3 per cent) were females giving a ratio of 111.4 males per 100 females (Table 7.4). The corresponding ratio for Tabriz City was 108.3 males per 100 females. An unusually low ratio of 69.4 males per 100 females

Table 7.3 : Number and percent of Households by Size

Number of Members	Number of Households	Percent
1 - 3	167	13.0
4 - 6	570	44.7
7 - 10	455	35.6
11+	83	6.5
Total	1,275	100.0

Source: Fieldwork.

Table 7.4 : Sex and Age Structure of the Sampled Squatter Settlement in Tabriz

Age groups	Total		Male		Female		Sex Ratio
	No.	%	No.	%	No.	%	
0 - 4	1,549	20.6	759	19.2	790	22.2	96.0
5 - 9	1,316	17.5	682	17.2	634	17.8	107.5
10 - 14	863	11.5	476	12.0	387	10.9	123.0
15 - 19	699	9.3	395	9.9	304	8.6	129.9
20 - 24	588	7.8	241	6.1	347	9.8	69.4
25 - 29	564	7.5	298	7.5	266	7.5	112.0
30 - 34	388	5.2	203	5.1	185	5.2	109.7
35 -- 39	323	4.3	173	4.4	150	4.2	115.3
40 - 44	312	4.1	189	4.8	123	3.6	153.6
45 - 49	236	3.1	138	3.5	98	2.8	140.8
50 - 54	238	3.2	132	3.3	106	3.0	124.5
55 - 59	103	1.4	59	1.5	44	1.2	134.0
60 - 64	158	2.1	102	2.6	56	1.6	182.1
65+	171	2.3	110	2.8	61	1.7	180.3
Total	7,508	100.0	3,957	100.0	3,551	100.0	111.4

Source: Fieldwork

in the 20-24 age-group can be attributed to the engagement of males in this age-group in military service. The heavy dominance of males in the older age groups may be explained by the high rate of mortality among females in the age groups. One of the most remarkable characteristics relating to the age structure of these households is the youthfulness of the inhabitants. As data in Table 7.4 and the age-sex pyramid for the inhabitants (Figure 7.2) indicate, 38.1 per cent of the total inhabitants were under 10 years of age and 58.9 per cent were under 20 years. Comparable percentages for Tabriz City were 27.5 and 52.2, considerably lower than those of the squatters. Thus, in the squatter areas, inhabitants under 18 years of age formed the dominant age-group, resulting in very high dependency ratios which put great pressure on family income. It should be noted that in Iran the youths under 18 years of age are economically dependent on the earnings of families.

7.5 Origins of households

According to the survey data, the great majority of squatters came from the rural areas within the Ostan of East Azarbayejan. Obviously, not all squatters have a rural origin, some of them came from small towns and some even from large cities of other Ostans. Table 7.5 shows the number and percentage of sampled squatter households by area of origin. 76 or 6.0 per cent of the sampled households were from Tabriz City and 93 or 7.3 per cent were from Tabriz Shahrestan. Households from other Shahrestans of the Ostan accounted for 1,094 or 85.8 per cent of the total sampled households while 9 or 0.7 per cent of households were from other Ostans, mainly from West Azarbayejan and only one household was from outside Iran (Baku in Soviet Azarbayejan). Thus, the squatter settlements of Tabriz were dominated by households from other Shahrestans of the Ostan. Table 7.6 shows the number

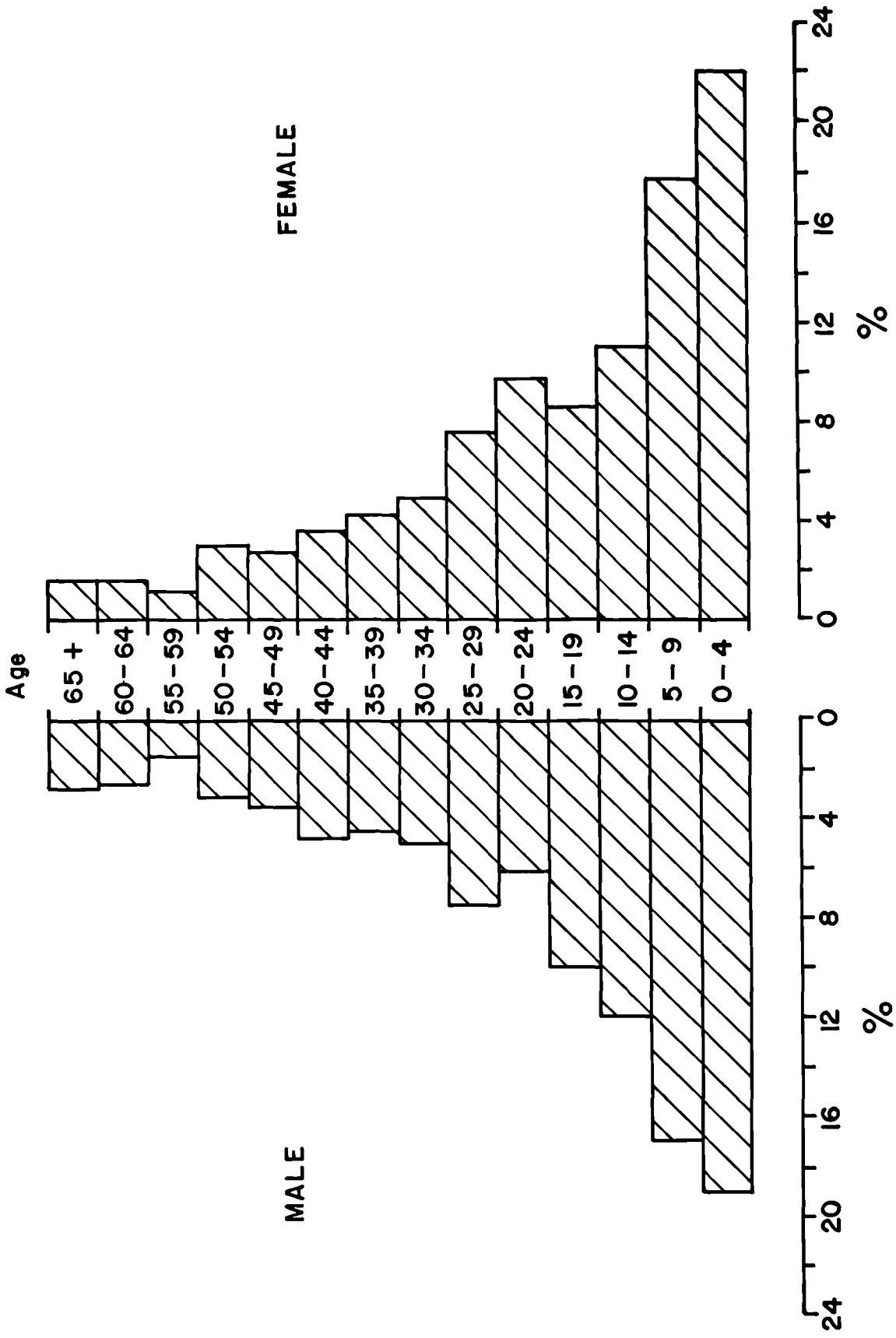

Figure 7.2 Age-sex pyramid of the sampled squatters of Tabriz.

Table 7.5 : Number and percent of Squatter Heads of Household of Tabriz, by Area of Origin, 1982

Tabriz Ciry		Tabriz Shahr-estan		Other Shahr-estans of Ostan		Other Ostans		Outside Iran		Not spec-ified		Total	
No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
76	6.0	93	7.3	1,094	85.8	9	0.7	1	0.07	2	0.15	1,275	100

Source : Fieldwork.

Table 7.6 : Number and percent of Sampled Squatter Household Heads of Tabriz from East Azarbayejan Ostan, by Shahrestan of Origin

Shahrestan	Number	Percent
Ahar	850	67.3
Tabriz	169	13.4
Hashtrud	61	4.8
Marand	58	4.6
Moghan	48	3.8
Sarab	40	3.2
Maragheh	25	1.9
Meshkinshahr	6	0.5
Ardabil	3	0.2
Mianeh	3	0.2
Total	1263	100.0

Source : Fieldwork

and percentage of the sampled squatter households from the Shahrestans of East Azarbayejan Ostan including Tabriz Shahrestan. Ahar Shahrestan accounted for more than 67.0 per cent of the total households from East Azarbayejan Ostan (850 households), while the Shahrestans of Maragheh, Meshkinshahr, Ardabil and Mianeh accounted for less than 3.0 per cent of the total households from the Ostan. Figure 7.3 illustrates the number of the sampled squatter households in Tabriz by Shahrestan and Ostan of origin. Migrants from rural areas of Ahar Shahrestan accounted for more than 57.0 per cent of households in squatter settlements of Tabriz. More than 75.0 per cent of the sampled household heads indicated that they came directly to Tabriz from their place of origin. To a large extent, this is due to the prominance of Tabriz in the northwest of Iran, to the relatively short distances involved and to the availability of transportation. Analysing migrants by distance reveals that 957 or 75.0 per cent of the sampled households came from an area within 100 kilometres of Tabriz City. 95.0 per cent came from distances less than 200 kilometres from Tabriz. This percentage increased to 95.4 when a 300 kilometres was considered (Appendix B). The sampled households from outside the Ostan were very few and accounted for only 10 or 0.8 per cent of the total sampled households. Thus, it may be concluded that the attraction of Tabriz City is primarily regional and confined to the area's linguistic minority. Comparing Tabriz with Tehran in terms of the migrants' origin Kazemi (1980,66) found that Tehran migrants came from all parts of the country with relatively little regard to distance, ethnic, or linguistic factors, while in Tabriz more than 95.0 per cent of the migrants were originally from other parts of the East Azarbayejan Ostan. Since Tabriz and Azarbayejan are Turkish-speaking areas, the attraction of Tabriz is restricted primarily to those who speak Turkish as their mother tongue. Non -Turkish speaking migrants would as easily depart for Tehran or other Persian-speaking cities.

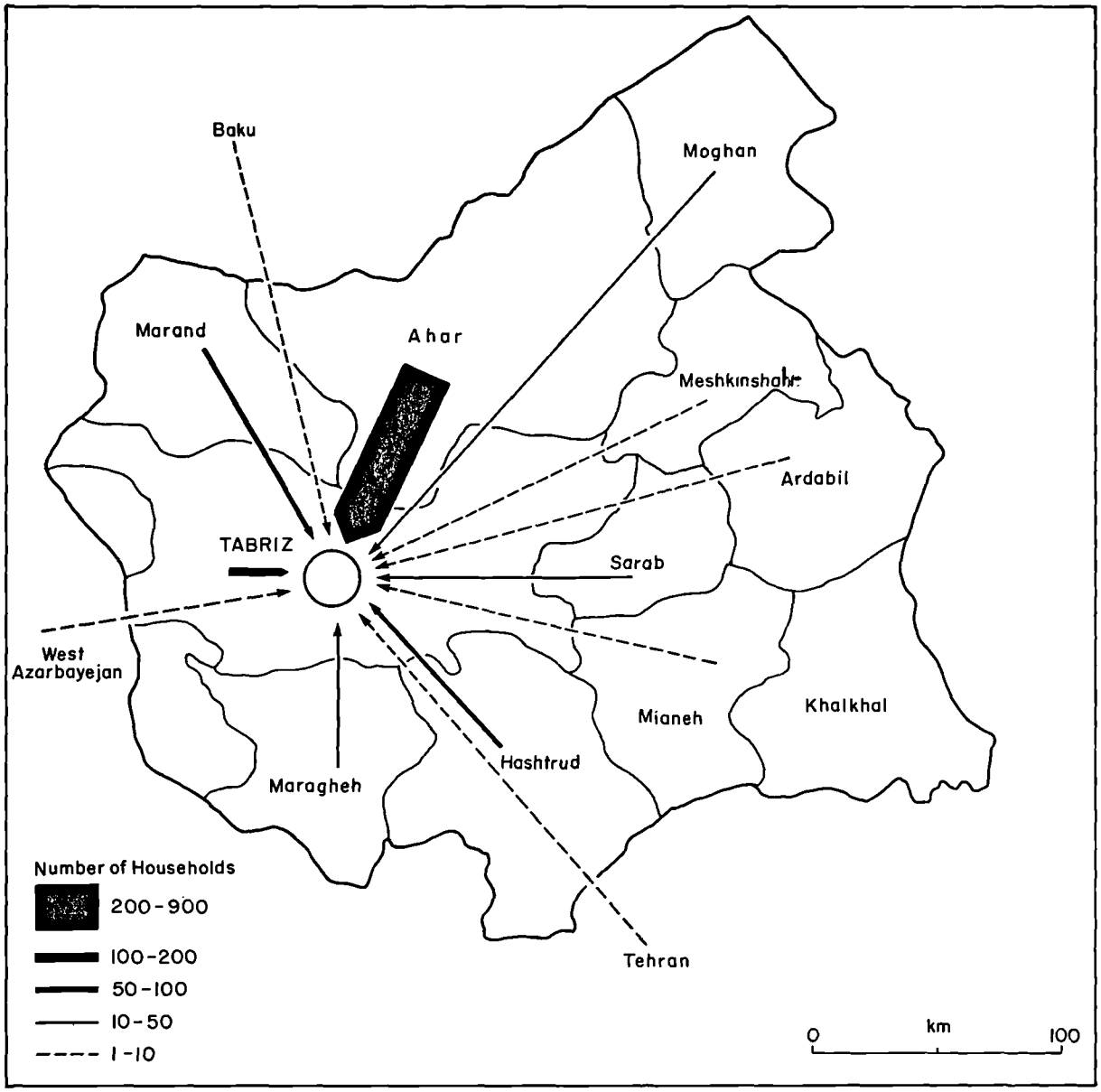

Figure 7.3 Number of the sampled squatter households by Shahrestan and Ostan of Origin.

According to the survey data, more than 70.0 per cent of the sampled household heads in the squatter settlements of Tabriz were accompanied by their families. Thus, as in many other squatter areas of the Third World, there has been a tendency to migrate with the family to join them as soon as they were settled in Tabriz.

The breakdown of previous occupation of squatters reflects the preponderance of agricultural backgrounds prior to migration to Tabriz; nearly 75.0 per cent of household heads had been engaged in agriculture or related pursuits.

Overall, squatters came to Tabriz without any special skills which would have given them any chance in competing for the better-paid and more prestigious jobs. Many migrants had made a brief visit to Tabriz before the final move. The role of the family is crucial in understanding the process of urban adaptation and integration into urban life. Having relatives in the city has clear advantages for the newly arrived and for their future well-being in the city. 733 (56.4 per cent) of the sampled household heads reported receiving some type of help from resident relatives. The type of help received included being taken in by relatives until other accommodation could be found, assistance in finding work, loans, and bus or train fares for the trip. 445 (34.2 per cent) of households indicated that they received no help. In terms of receiving help from resident relatives, Kazemi (1980, 44) has indicated that, in Tehran, relatives and friends of migrants have been instrumental in securing employment for 67.6 per cent of migrants after their arrival in the capital.

7.5.1 Reasons for migration

With regard to the reasons for migrating to Tabriz, an overwhelming majority of households made reference to economic consideration in one form or another. Related to this reason 619, or 48.5 per cent of household heads mentioned "Low income" and 365, or 28.6 per cent "Low income" and the lack of financial support in agricultural activities. Thus, more than 77.0 per cent of the sampled household heads left the villages due to inadequate income as a result of unsatisfactory employment and the increasing difficulty of maintaining a subsistence life in the rural areas of the Ostan. Similarly, the predominance of economic considerations is apparently characteristic of migrants in other major Middle Eastern cities such as Baghdad. According to Costello (1977,43) migrants to Baghdad, especially those from Iraq's southern provinces, move principally for economic reasons. It should be mentioned that, until the early 1960s, migrants' squatter settlements in Baghdad were built in the open spaces near the city's central district as well as on the outskirts, while the squatter settlements of Tabriz are exclusively established on the outskirts of the city. Considering reason for migration, it is however reasonable to conclude that as in many other parts of the Third World, push factors in the form of economic hardship are primary forces of migration for the peasants in rural areas of East Azarbayejan Ostan. For these peasants, economic considerations - low income in the village and the hope for higher expected income in the city - are the dominant reasons for migration. The survey data confirm the central importance of economic factors in migration to Tabriz City. Therefore, the findings of Ravenstein (1885), Stouffers (1940), Lee (1966) and others (see Chapter 1), emphasizing the primacy of economic reasons as causes of migration seem to be confirmed.

142 or 11.1 per cent of the sampled squatter household heads of Tabriz mentioned insecurity (conflict) in their communities of origin as a reason for migration.

Conflict between villagers has long been one of the major "push" factors in rural areas of the East Azarbayejan Ostan. Although the causes of conflict differed considerably from region to region, problems stemming from rights to water and to land appeared to be the principal cause of conflicts between villagers. In the tribal areas of the Ostan, however, conflicts arise largely from the system of grazing rights. According to Tapper (1979, 187), the main source of conflict among the Shahsavan nomads (in northeast Azarbayejan) has been economic. Emphasizing the economic considerations as the main source of conflict and hostility among the Shahsavan nomads, Tapper (1979, 190) has shown that inter-section fighting with fist, sticks, and stones, usually over an issue of pasture trespass or animal theft, is not infrequent, especially in the mountains remote from gendarmerie.

In rural areas, conflicts become more frequent where water is scarce. For example, in Tezerjan (southwest of Yazd), as Sunderland (1968, 615) has indicated, discrepancies between supply and demand of water can and do cause conflict, and satisfactory means of water allocation are an essential requirement for social harmony. Generally speaking, in the multicultural and arbitrarily bounded nations of Asia, social conflicts have always had something to do with the movements of peoples (International Development Research Centre, 1977, 52). In discussing the plight of northern Thailand, Dessaint (1971,334) wrote that social conflict was only the immediate cause of migration. Observing villages there, he found that, although the pressure of the land was an ever present factor, it took some social conflict, either within the tribe or without, to trigger the movement.

Among other reasons for migration to Tabriz, 90 or 7.0 per cent of the sampled squatter household heads cited lack of health services and only 13 or 1.0 per cent gave lack of transportation facilities in their areas of origin as the incentive factor. It should be added here that 21 or 1.6 per cent of the sampled household heads were born in the squatter area and 25 or 1.9 per cent gave no reason for migration.(Table 7.7).

7.5.2 Reasons for squatting

As shown in Table 7.8, 93.5 per cent of the sampled households attributed their living in the squatter settlements of Tabriz directly or indirectly to economic factors, i.e. their low income combined with low cost of land and housing in squatter areas. Among other reasons for moving to the squatter settlements, 3.8 per cent cited proximity to friends and relatives and 2.3 per cent gave the availability of free land for housing; only 0.4 per cent gave proximity to workplace as the motivating factor. Thus, among those who have moved to squatter settlements, the overriding consideration was economic. As stated earlier, the rural people migrated to Tabriz mainly because of low income, unemployment, and underemployment in their original settlements. They came in search of jobs and a way of making a livelihood. Discussing the role of the prior social relationships among the invaders in the establishment of squatter settlements, Roberts (1978, 147) has noted that the original establishment of squatter settlements is often based on prior social relationships among the invaders. He adds that the subsequent settlement also depends on having some relationships with the existing squatters. As Harrison (1976,161) has pointed out, the flood of in-migrants bursts all the barriers of planning and legislation in the cities of the developing countries. They ask for no one's consent to come, they just arrive. They do not ask official permission to knock

Table 7.7 : Reasons for Migration Among Squatter Households Tabriz, 1982

Reasons	No. of Household	Per cent
Low income	619	48.5
Low income, lack of financial support in agriculture	365	28.6
Insecurity, conflict between villagers	142	11.1
Lack of health services	90	7.0
Born in the area	21	1.6
Lack of transportation	13	1.0
Not stated	25	1.9
Total	1,275	100.0

Source : Fieldwork.

Table 7.8 : Reasons Given by Household Heads for Moving to Squatter Settlement

Reasons	No. of Household Heads	Per cent
Low income, low cost of land for housing	1,190	93.5
Proximity to friends and relatives	49	3.8
Availability of free land for housing	30	2.3
Proximity to workplace	6	0.4
Total	1,275	100.0

Source : Fieldwork

up a ramshackle home to live in or let out. They just get on with it. This also applies to the migrants to Tabriz and other major cities of Iran particularly to Tehran.

Since the majority of migrants from rural areas are poor and unskilled, they are forced to take on the lower-paid jobs available in the tertiary sectors in the city, such as street cleaners, doormen, watchmen. It is not surprising, therefore, that the majority of the squatters in Tabriz cited economic factors as the reason for living in the squatter settlements. It should be added that, according to the survey data, the monthly income of squatters employed in tertiary sectors ranged from 7,000 to 10,000 rials (£50-72).

7.6 Housing patterns, ownership and size

7.6.1 Physical condition of the squatter settlements of Tabriz

Squatter settlements are physically of very diverse types. According to Roberts (1978,137) squatter settlements provide housing for between 10 and 20 per cent of the population of many large cities in Latin America. In Asia, figures of 25 per cent of the population of Djakarta and Kuala Lumpur and 26 per cent of Singapore's population are quoted as living in squatter settlements.

Squatter settlements are usually rudimentary housing of wood, thatch or even cardboard constructed by the residents on public and private land which they have illegally occupied. Even where land is legally settled with its owners sub-dividing and selling in small lots, the first residents often build the houses with their own labour and materials. Considering various types of squatter settlements in the developing countries, squatter settlements of Tabriz can be identified as a peripheral type, i.e. they are usually established on

the periphery of the city in undesirable locations such as steep hillsides that for one reason or another are not in great demand. In this context squatter settlements of Tabriz show broad similarities with those in other cities in developing countries such as Rio de Janiero and Caracas. Describing the physical condition of the squatter settlements of Caracas, Abrams (1979, 296) writes:

"Travelling by automobile from Caracas along the sea to the Macuto area, one never loses sight of growing rancho colonies carved out niches or built on the mountainside. When the carges become sharp and steep, the ranchos fade, only to reappear on the first gentler incline." He adds that the type of rancho construction varies from house to house. Earth, carboard, old boxes, tin, scrap, stucco, and brick tile are common materials.

The physical condition of the squatter settlements of Tabriz exhibits characteristics similar to those of the squatter areas in other developing countries in terms of lacking a deliberate planning or urban zoning and other urban facilities such as open spaces, parks, paved streets and so on. In the squatter areas of Tabriz, the houses are of one or two storeys, poorly built and crowded closely together. The narrow lanes in these squatter settlements are bordered by high mud walls, in which double doors lead into the courtyard of each house. The houses are built of mud, brick, cement and wood. The types of construction materials used vary with each family's economic well-being. Generally, houses face toward the south so that the warmth of the winter sun can carry directly into the main rooms. The better houses have one living room in which the cherished possessions of the family are on display.

There is no open space, no park, no educational facilities such as schools in the squatter areas of Tabriz. In the northern

squatter area of Tabriz, as one goes further north on the mountainside, the dwelling units are usually confined to a single room housing a whole family. The buildings are flat-roofed and, owing to the construction materials used, are vulnerable to earthquake as well as heavy snow fall in the winter and floods resulting from the rainfall during the spring and autumn seasons which are common characteristics of the area. Furthermore, it should be borne in mind that Tabriz City is located on the earthquake zone. Especially vulnerable are the squatter areas of Tabriz where the majority of houses are built of mud and other weak construction materials.

There is no sewerage system and refuse collection in the squatter settlements of Tabriz. The used water running out from the houses creates a steady flow of dirty water downwards along the steep alleys and footpaths of the settlements. Access to the settlements is almost wholly by unmade tracks, which because of their steepness are sometimes dangerous and slippery, especially during the winter. As noted earlier, the most serious problems associated with the squatter settlements relate to the general lack of normal urban facilities and utilities. There are a number of shops in the squatter areas of Tabriz but these are small and have a range and quality of goods to cater for the low incomes of the population.

Every major mahaleh (district) in the squatter settlements of Tabriz has its own tea-house frequented usually by men from that district. There is also a major tea-house which functions as a central gathering place. Squatters meet in the tea-house, usually in the evening, to exchange views, settle problems and make decisions. The above discussion provides a general understanding of the physical conditions under which the squatters of Tabriz live.

7.6.2 Size of building plot

More than 50.0 per cent of the building plots in the squatter settlements of Tabriz were between 50-100 sq.m. in area; dwellings with 100-150 sq.m. accounted for 22.8 per cent and those with 150-200 sq.m. accounted for 10.3 per cent; only a small percentage of dwellings (3.4)were built on plots of more than 200 sq.m. (Table 7.9).

Unlike the dwelling units of the squatter areas of Tabriz, as Karpat (1976, 94) has noted the Turkish squatters' standards of housing and urban living followed those of the established classes rather than their own means and standards. According to him, the average floor space in Turkish city apartments, notwithstanding the wasted space due to poor planning, varied between 100 and 150 sq.m. (Karpat, 1976,94).

Generally, most of the squatters of Tabriz built their houses out of unbaked brick, wood and mud and a small number used other construction materials such as cement, iron and stucco in their houses. Mud, baked and unbaked brick are dominant construction materials in the squatter areas of Tabriz. Traditional mud bricks are made of clay mixed with water set in a square wooden mould and left to dry in the sun. Their chief drawback is that, after a few years, due to heavy snows and rains, a dwelling unit made of them is liable to collapse.

In the squatter areas of Tabriz the size of dwellings is determined in large measure by the number of people in the family, including relatives, by their financial condition and by the squatter's image of urban life and comfort.

7.6.3 Number of rooms

According to Harrison (1978, 168), one-room dwellings are the rule in squatter areas. The extended family, with grandparents, great uncles, brothers and all their wives and children in the same compound,

Table 7.9 : Classification of Houses by Size of Plot

Area of Plots sq.m.	No. of Houses	Per cent
Up to 50	113	8.7
50 - 100	661	50.8
100 - 150	296	22.8
150 - 200	134	10.3
200+	44	3.4
Not stated	27	1.8
Total	1,275	100.0

Source : Fieldwork

Table 7.10 : Number of Rooms in Each Household, Squatter Settlements of Tabriz 1982

Rooms	No. of Households	Per cent
1	296	23.2
2	785	61.6
3	133	10.4
more than 4	61	4.8
Total	1,275	100.0

Source : Fieldwork

tends to break up here into its constituent nuclear units : two parents and their children. In terms of the size of households, the squatter areas of Tabriz present a different picture. As stated earlier, of the 1,275 sampled households in the squatter areas of Tabriz, 538 or 42.4 per cent had more than seven members each. Thus, it may be concluded that there has been a considerable number of extended families living in the squatter areas of Tabriz. Furthermore, despite Harrison's statement, the squatter areas of Tabriz were dominated by two-room dwellings.

As Table 7.10 shows only 4.8 per cent of dwellings had three rooms; the majority (61.6 per cent) had two rooms, but as many as 23.2 per cent consisted of only a single room. Similarly, according to Karpat (1976, 94) 53.0 per cent of the dwellings in squatter areas of Istanbul had two rooms, and 30.0 per cent had three or more rooms while only 17.0 per cent of dwellings had a single room. Overcrowding is a common feature in squatter areas. As Harrison (1979, 169) has noted, in Tehran more than nine out of ten squatters live in one-room units with an average of only three square metres per person. He adds that overcrowding imposes mental strains, family tensions increase,rivalries between brothers and sisters become more intense,privacy is an unknown luxury. Overcrowding adds to the other stresses of dirty water and lack of health posts and schools, depressing the productivity of breadwinners and pushing the children towards educational failure.

7.6.4 Home ownership

Since most migrants in the squatter areas of Tabriz strive to build their own dwellings the rate of home ownership is overwhelmingly high, and only a small number of households rented their houses. As

shown in Table 7.11, 93.7 per cent of squatters owned their own houses, 3.9 per cent rented the house and 2.4 per cent paid no rent. Similarly, a large percentage of squatters living in the three gecekondus of Istanbul owned their houses. According to Karpat (1976,41), 84.0 per cent of squatters in Istnbul owned their houses, whereas only 9.0 per cent rented them and 7.0 per cent did not pay rent.

7.7 Literacy

Of the total of 2,844 male residents 6 years old and over in the squatter areas of Tabriz, 1,076 or 37.8 per cent were literate, i.e. able to read and write, while of the 2,548 female residents 6 years old and over only 199 or 7.8 per cent were literate (Table 7.12). Unfortunately, due mainly to classification problems, the educational attainment of the residents is not presented in Table 7.12. The low rate of literacy among women is the consequence of traditional discrimination and limited exposure to the outside world. Furthermore, the reasons for women's high illiteracy would include : the tradition that girls should be kept at home to remain "wholesome"; parents' ignorance and conservatism in accepting a low status for daughters in the family; the need for someone to take care of brothers and sisters, and poverty of the family and the need to earn a living.

The relationship between age and literacy can be understood from Table 7.13. Table 7.13 also indicates the high literacy proportion among young persons as compared with older persons. Thus it can be concluded that the younger the residents the higher the literacy rate.

Table 7.11 : Home Ownership Among Squatters in Tabriz, 1982

Categories	No. of Household	Per cent
Owns the house	1,195	93.7
Rents the house	50	3.9
Pays no rent	30	2.4
Total	1,275	100.0

Source : Fieldwork

Table 7.12 : Number of Literate Inhabitants of 6 years and over, by Sex, for the Squatter Settlement, Tabriz, 1982

Sex	Total 10 years and over	Number of literate residents	Per cent
Male	2,844	1,076	37.8
Female	2,548	199	7.8
Both sexes	5,392	1,275	23.6

Source : Fieldwork

Table 7.13 : Per cent of Literate Inhabitants by Age-groups and Sex for Squatter Settlement, Tabriz, 1982

Age group	Per cent	
	Male	Female
6 - 9	17.7	5.3
10 - 14	24.0	5.9
15 - 19	18.5	2.2
20 - 24	7.2	0.8
25 - 29	8.7	0.3
30 - 34	3.4	-
35 - 39	2.2	-
40+	3.1	-
Total	84.8	14.5

Source : Fieldwork

7.8 Economic and occupational structure

As mentioned earlier, economic factors play a dominant role in the formation, development and eventual urban integration of the squatters. Therefore, occupation and occupational mobility have a central place in the life and transformation of the squatters. As in many other squatter areas, in Tabriz the majority of squatters appear to be unskilled, poverty-stricken and unorganized labourers and hence willing to work long hours and to take jobs that skilled and organized labour would not ordinarily accept. Terms "unskilled", "poverty-stricken" are also used by Karpat (1976,100) in the case of squatters in Istanbul.

As might be expected, the rate of employment among sampled male household heads in the squatter areas of Tabriz was high. As Table 7.14 indicates, more than 50.0 per cent of sampled male household heads were working in unskilled and semiskilled jobs, while only 7.3 per cent of the sampled household heads held skilled jobs. As can be seen from Table 7.14, 9.5 per cent mentioned their jobs as carpet weaving. It should be added here that, in Iran, carpet weaving is one of the important traditional occupations among the villagers in general and lower class people in the cities in particular. Since a considerable proportion of the squatters engaged in carpet weaving are self-employed and mostly under the legal activity age, i.e. below 12 years of age, the estimation of their income is open to doubt. Nevertheless, the daily income of carpet weavers varied considerably by their age and skill, ranging from 300 to 3,000 Rials (£2.0 to £21.0). They work for commercial carpet buyers, who pay them either on an hourly basis for making carpets in their home, or for making carpet within a specified time span at a set price.

8.3 per cent of the sampled household heads in the squatter areas of Tabriz were shopkeepers, 2.7 per cent shoemakers, 3.0 per cent

Table 7.14 : Occupation Among Male Squatter - Household Heads, by Age-group, Tabriz, 1982

Occupation / Age-group	Unskilled or semi-skilled workers %	Skilled %	Shopkeeper %	Street vendors %	Carpet weaving and crafts %	Shoemaker %	Government employee %	Unemployed %
12 - 14	-	-	-	-	0.08	-	-	-
15 - 19	1.3	0.2	0.08	-	0.9	0.08	0.08	-
20 - 24	2.4	1.0	1.1	0.08	2.3	0.3	0.08	0.5
25 - 29	6.9	1.9	1.0	0.8	2.0	0.5	0.5	1.8
30 - 34	6.5	1.0	0.8	0.2	1.5	0.6	0.4	1.1
35 - 39	7.0	1.0	0.8	0.1	1.0	0.5	0.3	1.6
40 - 44	9.2	1.3	1.0	0.2	0.7	0.5	0.1	1.4
45 - 49	6.4	0.1	1.0	0.5	0.5	0.1	-	1.9
50+	10.4	0.8	2.5	1.0	0.5	0.1	-	0.5
Total	50.1	7.3	8.3	3.0	9.5	2.7	1.5	8.8

Source : Fieldwork

street vendors, 1.5 per cent government employees and finally 8.8 per cent were unemployed. It must be mentioned that 8.0 per cent of the sampled household heads were sick or too old to work thus are not included in Table 7.14. It is worth noting that, with the exception of the government employees, the remaining household heads engaged in various occupations are considered as self-employed.

Table 7.14 also shows the age-groups of the sampled household heads in relation to the various types of occupation. Considering the relationship between occupation and age, it can be concluded that the older the household heads, the higher the rate of employment. It should be remembered that the situation was the reverse in the case of literacy i.e. the rate of literacy was high among young persons due mainly to education facilities of urban areas while older persons with rural backgrounds seemed unlikely to have such facilities.

The high rate of employment is not unique to the squatter areas of Tabriz, in many other squatter areas of the Third World countries the rate of employment is remarkably high. According to Karpat (1976, 100) 93.0 per cent of male squatters in the squatter areas of Istanbul were employed. In Lima, Peru, a bariada had 99.0 per cent employment among the men and in Caracas, Venezuela, 72.5 per cent of the men were employed. In Delhi, India which is known for its high rate of unemployment, 81.2 per cent of busti dwellers had jobs. Algerian bidonville dwellers had 92 to 94 per cent employment. The same high rate of employment prevailed among the squatters in Rio (Banifatemeh 1982, 125).

7.8.1 Squatter earnings

It is difficult to obtain accurate information concerning the squatters' wages and monthly or annual income however, and this seems to be a problem also in other squatter areas of the Third World. For

example in the squatter areas of Istanbul, as Karpat (1976, 105) has indicated, there has been an obstinate effort on the part of men and women to appear much poorer and more destitute than they actually were. According to him, the squatters felt that appearing relatively well-to-do would be held against them and possibly used as a reason for not granting them the right to settle elsewhere. Nevertheless, according to his estimates, the annual average earnings per family in the squatter areas of Istanbul was 8,200 liras (12,300 Rials).

Information dealing with the monthly income of the sampled household heads in the squatter areas of Tabriz is presented in Table 7.15. More than 47.0 per cent of household heads had an income above 17,000 Rials per month (£121).* 9.2 per cent earned less than 500 Rials per month and the monthly income of 27.6 per cent ranged from 500 to 17,000 Rials. It should be mentioned that 11.4 per cent of the sampled squatter household heads did not state their income and 4.5 per cent claimed to have no income at all.

7.9 Conclusion

The size and rapidity of the expansion of squatter settlements of Tabriz has been so great that it is currently one of the most serious problems of the city and therefore, of great concern to the city authorities. Not only has it created enormous potential pressures for the extension of urban amenities and services, but also its present degree of concentration has led to the emergence of a poor and unhealthy environment.

According to the findings of the sample survey, rural-urban migration, over-urbanization and rapid industrialization of Tabriz appeared to be the main causes of formation and expansion of squatter settlements in the northern and southern fringes of the city. Survey

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* 140 Rials = £1.0.

Table 7.15 : Monthly Income of Household Heads, in Rials, Squatter Settlement, Tabriz

Income in Rials	No. of Households	Per cent
Less than 5,000	117	9.2
5000 - 6990	49	3.8
7000 - 8990	36	2.8
9000 - 10990	78	6.1
11000 - 12990	33	2.6
13000 - 14990	32	2.5
15000 - 16990	122	9.5
17000+	604	47.3
Not stated	146	11.4
Without any income	58	4.5
Total	1,275	100.0

Source : Fieldwork

data show that there are considerable differences between Tabriz City and the squatter settlements in terms of demographic, social, economic and environmental characteristics.

Comparing the findings of this study with the findings of similar studies made elsewhere in the world such as Turkey and Latin American countries indicates that there are striking similarities in many aspects between the squatter settlements in Tabriz and those in different parts of the world.

Despite the lack of urban services such as running water, sewerage systems, roads and public transportation in squatter areas of Tabriz, the number of households has increased remarkably during the last decade (1970-1980).

It was found that 99 per cent of the sampled squatter households came from rural and urban areas of various Shahrestans within East Azarbayejan Ostan mainly because of low incomes of origin areas.

Considering the findings of the sample survey, the following points on reducing the rate of rural-urban migration in East Azarbayejan Ostan and improvement of squatter settlements of Tabriz may be suggested:

1. The policy toward the squatters in Tabriz must involve regarding them as a key element in the development process and enhancing their role in urbanization development. Suggestion made by Karpat (1976, 234) in the case of gecekondus, supports the idea that squatters should be regarded as a key element in the development process. He has stressed that the policy toward the gecekondus in Turkey and similar settlements throughout the world must begin by regarding them as key factors of development and by maximizing their role in urbanization as well as village development whenever possible.

2. Priority should be given to rural development which could be expected to retard the migration from rural areas and prevent labour shortage in agriculture.

3. The gap between rural and urban areas in their level of income, education, sanitation and social conditions needs to be narrowed in order to prevent village depopulation, over-urbanization and their by-product, the squatter settlement.

4. Various manufacturing and production jobs must be provided for the migrants who are already in the city. A comprehensive and co-ordinated national and regional plan is required, not only to promote a high rate of investment in urban industrial growth, but also to improve rural life and to encourage village development programmes.

5. In the squatter areas of Tabriz, no plan, either for the improvement or development and resettlement of the residents, can be carried out properly, unless a detailed and comprehensive study is undertaken by the authorities of the city. A better result can be expected if the suggested comprehensive survey involves the cooperation of related researchers and experts. These efforts seem to be necessary and will undoubtedly greatly help any further decision making.

6. Provision for the extension of the electricity system, water for drinking and domestic use, sewerage systems, and other urban facilities, may help to improve the quality of life of the households in the squatter areas of Tabriz, both from the point of view of their health and their living standard.

7. Appropriate action in the form of creation of job opportunities and financial support for families who are prepared to go back to their original home places, can be taken to prevent

further expansion of the squatter areas. Indeed, once the needs of villagers in terms of living conditions are met in their villages they will be less likely to leave their home for urban areas.

8. Finally, it must be remembered that the squatter settlements of Tabriz clearly illustrate the resourcefulness of their inhabitants and indicate the potential for improvement that could be realised if realistic programmes were implemented. Failure to recognize this could have tragic consequences for Tabriz City as a whole.

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CHAPTER 8

CONCLUSIONS

The preceding chapters have shown that inter-Ostan migration is a major feature of the population geography of Iran and that it is closely associated with the process of urbanization, to which it makes a major contribution. In addition, the examination of inter-Shahrestan migration in East Azarbayejan Ostan (Chapter 6) reveals the extent to which Tabriz city, the Ostan's capital is affected by migration of people from rural areas and small towns of the Ostan.

The number of life-time migrants recorded by the place-of-birth data increased from 2 million in 1956 to 5 million in 1976. The number of migrants who crossed the Ostan boundaries (inter-Ostan migrants) was greater than that of migrants who moved within the Ostans (inter-Shahrestan migrants) both in 1966 and 1976. In other words the proportion of inter-Ostan migrants increased by 2.0 per cent while that of the inter-Shahrestan migrants increased only by 0.4 per cent between 1966 and 1976. Thus, it can be concluded that inter-Ostan migration is more common than inter-Shahrestan migration in Iran.

When viewing the percentage of people living outside the Shahrestan in which they were born, the highest percentage (28.0) exists for those between the ages of 20 and 40. Beyond that age for both sexes the percentages are always below 22. As would be expected, those now living in the Central Ostan have the smallest proportions living within the same Shahrestan in which they were born.

Examining the patterns of inter-Ostan migration revealed that the most common destination for inter-Ostan migrants is the Central Ostan. Central Ostan, with a very strong nationwide attraction,

appeared to be the main destination for migrants and experienced large-scale net in-migration (76.0 and 84.0 per cent of the total net in-migrantsin 1966 and 1976 respectively). Khuzestan, Mazandaran and to a lesser degree Ilam, Oman Sea, West Azarbayejan and Kohkiluyeh gained migrants, but all the other Ostans had a negative net change in their population due to migration. East Azarbayejan Ostan alone accounted for more than 25.0 per cent of the total net out-migration.

Although the pattern of inter-Ostan migration was dominated by Central Ostan, there was considerable migratory interchange between contiguous Ostans. It was found that the Ostans farthest from the main centres of population were the least likely to receive migrants, such as Sistan-Baluchestan Ostan in the southeast and Lorestan Ostan in the southwest of the country.

In Iran, the main reasons for migration can be identified as the varied economic employment opportunities in different Ostans. In particular this factor is most relevant in the cases of Central Ostan, Khuzestan and Mazandaran. In Central Ostan, apart from the sheer dominance of Tehran in terms of attracting migrants from all over the country, its satellite cities such as Karaj play a significant part in the absorption of inter-Ostan migrants. For example, the rate of increase of population for Karaj city was 12.1 per cent annually (1966-1976), whereas for the country as a whole it was 2.7 per cent per annum. In fact more than two-thirds of the city's population in 1976 consisted of in-migrants. This rapid increase in population is reflected in the ever-increasing problems of housing, transportation and amenities.

Inter-Ostan migration was dominated by adults of working age.

It was shown that volumes for the younger ages far exceed those for the older ages. Investment in migration, like other investments of human beings (for example, education, and job training), is expected to pay off in the long run if not immediately. Thus the older people may be less inclined to migrate simply because the pay-off period is short, whereas young workers have a longer expected lifetime in which to earn and to make their move profitable. Furthermore, young people are usually able to adjust more rapidly than old people to the social-psychological and environmental conditions of their chosen destination.

Analysis of the sex ratio patterns of migrants revealed that in 1966, except in the case of the age-group 15-19, inter-Shahrestan migration was dominated by male migrants. In terms of inter-Ostan migration all the age-groups showed a dominance of male migrants. Sex ratios ranged from 103.7 males per 100 females in the age-group 15 - 19 to 158.8 in the age-group 20 - 24. In 1976 there were only two age-groups (20 - 24 and 25 - 29), in which female inter-Shahrestan migrants out-numbered male migrants. Inter-Ostan migration was clearly dominated by male migrants. Sex ratios ranged from 102.4 males per 100 females in age-group 65+ to 169.0 in the age-group 20-24.

Overall, in Iran migrants tend to move to the Ostans with large and dynamic cities which may provide them with better services and amenities. These 'pull' factors at destination are usually reinforced by the 'push' forces such as low income, awareness and aspiration at the place of origin.

The effects of the land reform programme in Iran have been of critical importance. The implementation of land reform (1963) weakened rather than strengthened the ties of the rural peasantry to the land. It was shown in Chapter 3 that, under the land

reform programme in Iran, land was granted to those families who formerly enjoyed tenancy and cultivation rights. Farm labourers and non-farm labourers (Khosh-neshins) were left out. This stimulated bitter class consciousness in villages and provided further incentive to leave.

Urbanization Iran's population has become increasingly urban, particularly since 1956. In 1956, 5,953,563 (31.4 per cent) of the total population of Iran was urban. This proportion had risen to 15,854,680 (47.0 per cent) in 1976.

There were considerable variations between Ostans in terms of the proportion of urban population. More than one-third of the nation's urban population was living in the Central Ostan in 1976. Thus the Central Ostan has played a considerable part in the rate and level of urbanization in Iran.

Factors causing the pattern of urban population distribution differed from Ostan to Ostan. Concentration of various industrial establishments in Khuzestan, the main oil region of the country was the main cause of urban population growth in this Ostan. Central Ostan owes its high percentage of urban population to the capital city of Tehran. A large number of Ostans in the eastern and southern parts of Iran, such as Sistan-Baluchestan, Hormozgan and Bushehr, represent the lowest percentage of urban population, due mainly to the severely dry, hot climate, scarcity of water and poor quality of soil.

Analysis of the rates of urban and rural population growth respectively reveals that, in Iran as in many other countries in the Third World, the urban population growth rate is substantially

higher than that in rural areas. However, the growth rate is not constant among the cities; a remarkable differential exists between the growth rates in the larger cities and those recorded in the smaller towns. Thus, it can be concluded that urban growth does not advance at a similar rate for all levels of urban hierarchy. Of particular interest are cities with a population of 100,000 and more. Cities of 100,000 and over have grown at least twice as fast as those of less than 100,000 inhabitants, and almost three times as fast as the national population growth. One immediate result of this imbalance of urban growth is reflected in the hierarchical distribution of city system in Iran. It has been shown that the distribution of cities in Iran is 'primate' rather than 'ranksize'. Considering city size classes, the differential attractiveness of big cities becomes evident. Furthermore, the differential population growth is a reflection of socio-economic, administrative and environmental factors, all of which facilitate the growth processes. It should be noted that, as in many other developing countries, in Iran's urban population they do not necessarily have access to the benefits of economic development. Indeed, this type of urbanization is not the result of social or economic development but is an outcome of unequal distribution of wealth across the Ostans.

Examination of urbanization and its relationship to internal migration indicates that, in Iran, modern urban growth is too considerable to be accounted for by natural increase alone; migration has played a decisive role. A major proportion of urban population growth has been the result of internal migration. A large number of Iranian cities experienced a remarkable population increase due to net in-migration between 1956 and 1976. Ostan

capitals such as Ahwaz, Esfahan, Shiraz and Tabriz showed a considerable increase in their population due to net in-migration. Considering the position of Tehran in Iran's urbanization process indicates that the population of Tehran has been subject to a very rapid increase during the last 20 years. In 1976 the population of Tehran was 4.5 million, containing more than 13.0 per cent of the total and more than 28.0 per cent of the urban population of the country. During the 1956-1966 decade more than 58.0 per cent, and during the 1966-1976 decade more than 35.0 per cent of population growth of Tehran was due to net in-migration. The primary index for Tehran increased from 1.9 to 2.3 in two decades (1956-1976), widening the gap between the capital and the next three largest cities.

Inter-Shahrestan migration in East Azarbayejan-Ostan

With an overall population density of 47.8 per sq. km. (national average 22.8 per sq. km), East Azarbayejan ranks as one of the most densely peopled areas of the country. Being one of the most important agricultural areas in the country, East Azarbayejan has some industrial and commercial significance as well. Water, soil, topography, as well as the increasing dominance of Tabriz city as a metropolitan area have been the dominant influencing factors in the distribution of population in East Azarbayejan. The Ostan's population increased by 21.7 per cent between 1956 and 1976, with an annual average rate of 2.2 per cent. The rate of increase in the Ostan was well below the national average due mainly to the heavy out migration from the Ostan. There were notable differences between urban and rural areas in the rate of population increase. It has been shown that the urban population

of the Ostan increased by more than 57.0 per cent between 1956 and 1976, while the rural population increased only by 8.6 per cent in the same period. This indicates that, despite a relatively high fertility rate in rural areas, rural population growth was slow. This was due mainly to rural-urban migration, but an increase in the number of urban places also had some effect. One of the most notable features of urbanization in East Azarbayejan is the dominance of Tabriz Shahrestan. 47.0 per cent of the urban places, containing more than 60.0 per cent of the urban population of the Ostan are concentrated in Tabriz Shahrestan. Tabriz city, alone accounted for more than 50.0 per cent of the Ostan's urban population. The concentration of the urban population and function in Tabriz replicates, at the regional scale, the position of Tehran with respect of Iran as a whole. Despite rapid urbanization of East Azarbayejan,the high proportion of rural populations in Shahrestans such as Hashtrud, Khalkhal, Ahar, Sarab and Mianeh indicates the undeniable significance of the agricultural activities and the importance of rural life in this Ostan. Undoubtedly, the mass rural-urban migration which is one of the most widespread demographic features of East Azarbayejan reduces the productivity of the rural areas on one hand, and on the other hand creates a vast number of socio-economic problems in the urban places. Industrialization has been the most important factor in the urbanization of East Azarbayejan Ostan. The establishment of various industrial units in the urban places of the Ostan, particularly in Tabriz City has provided strong incentives for migration to cities and has resulted in a steady increase in the percentage of the work force employed in industrial activities and allied services. Furthermore, construction, which does not require skilled labour,

has been accelerated in the last twenty years, and this also attracted rural migrants. But beyond the opportunities for employment provided by industrialization, its contribution toward raising the standard of living of the urban population above that of the rural, especially in the largest cities of the Ostan, has led to increased awareness and expectation on the part of people living in rural areas and small towns, providing a stimulus for their migration to major cities, particularly to Tabriz, in the hope of attaining a better standard of living.

Examining the volume of net-in and out-migration of different Shahrestans, heavy net losses were observed among some rural Shahrestans, e.g. Ahar. More than 89.0 per cent of the population of Ahar is rural and it was the main net loser in the Ostan. By contrast, Tabriz Shahrestan, two-thirds of whose population is urban, was the major net gainer as well. It can be concluded that the higher the level of urbanization, the higher the volume of net migration gain.

Rural-urban migration is a most common phenomenon in East Azarbayejan. This was supported by the findings of the sample survey conducted in the squatter area of Tabriz. It was found that 90.0 per cent of the sampled squatter households came from rural areas and small towns of the Ostan. The study of the squatter settlements in the northern and southern fringes of Tabriz indicates that these settlements are primarily the product of rural-urban migration. It was found that rapid industrialization has created a demand for an industrial labour force and stimulated large-scale movement of rural population to Tabriz in search of work and a higher standard of living than that afforded by the villages. It was also found that most of the migrants from villages and rural

areas were unskilled and had difficulty finding employment. With regard to the reasons for migrating to Tabriz,an overwhelming majority of households made reference to economic considerations in one form or another.

Despite the lack of urban services such as running water, sewerage system, roads and public transportation in the squatter area of Tabriz, the number of households has increased remarkably during the last decade (1970-1980).

The inclusion of some conclusions and suggestions at the end of Chapter 7 may seem to have reduced the task involved in producing a final general conclusion. However, considering the findings of the analysis of internal migration and urbanization in Iran, and in East Azarbayejan in particular, the following points may be suggested.

1. The high priority and emerging necessity to modernize and commercialize the existing agricultural situation in Iran could have, undoubtedly, a distinct impact upon the urbanization pattern. It is also advantageous, in the long run, to guide labour-oriented and wage-sensitive industries, as well as small-scale industrial plants to be located closer to rural areas and their enormous manpower resources.

2. It is likely that, under a decentralized development strategy, the growth of major urban centres would be less rapid and speculative, public investment would be directed to a greater extent to agricultural and industrial development or to national and regional network infrastructures of transportation, water and power economy.

3. The huge investment of capital, mainly in service industries has led to an influx of population from rural areas and small towns to the large cities. In fact the massive redistribution of population, accumulating in large urban units of considerable spatial extent, represents one of the most distinctive demographic features of contemporary Iran. The establishment of industrial estates and zones in various parts of the country could provide points of attraction to investors and local inhabitants.

4. It was shown that Tehran has been growing at the expense of other areas. Since no signs of a decline in this trend are evident, it is highly possible that the trend will continue in the future. Tehran, with its many shortages and problems, provides an example of an urban centre which has experienced rapid and intensive growth without parallel planned development. Moreover, most large cities in Iran are characterized by a rapid rate of growth and many of them are already experiencing critical shortages of urban facilities. A profound awareness is needed both on the part of governmental agencies, as well as by the general public for comprehensive planned urban development.

5. The growth of the urban population due mainly to rural-urban migration, has generated greater demand for foodstuffs, which is increasingly met by higher imports. At the same time, there is continuous out-migration from rural areas. Agricultural development must be emphasised and encouraged. Commercialization and modernization of present subsistence and low output agriculture and the replacement of food imports by local production must be given top priority in development. This is a major and fundamental matter.

6. The establishment of a responsible organization in terms of providing more reliable and accurate information on the trends of internal migration by recording the number and status of migrants, including the characteristics of origin and reasons for migration, seems to be of crucial importance for national and regional planning.

APPENDIX A

Questionnaire used in a sample survey of the squatter settlements Tabriz, 1982

Characteristics of the household head

Personal and family characteristics

Name of household head

Male ☐ Female ☐ age .....(years)

Single ☐ Married ☐

Level of literacy .....

Present occuation .....previous occupation.....

Date of migration to the area .....

Place of birth, Ostan .....Town .....,Village .....Tribe.....

Length of residence in this area .....

Total number of household members .....Male .....Female .....

Total number of literate household members.....Male.....Female .....

District .....House number .....

Characteristics of household members

House-hold mem-bers	Relat-ionship to head of house hold	Age	Literacy status	Level of educ-ation	Occupa-tional status	Type of Occupa-tion	Monthly income	No. of days without work per month
1 2 3 4 5 6 7 8								

Previous occupation of household members

Household members	Type of occupation	Length of employment	Income paid daily or monthly	Level of income	Place of work	Reasons for leaving

Occupational characteristics of head of household

Daily working hours of head of houshold

Less than 8 hours ☐

8 - 10 hours ☐

12 - 14 " ☐

More than 14 " ☐

Not stated ☐

If you are self-employed i.e. not in the employment of another individual, organization or factory, describe your type of occuation.

Carpet weaver ☐

Shopkeeper ☐

Shoemaker ☐

Street vendor ☐

Skilled labourer ☐

Unskilled labourer ☐

Total monthly income of household

Less than 5,000		Rials	☐
5,000	- 6,990	"	☐
7,000	- 8,990	"	☐
9,000	- 10,990	"	☐
11,000	- 12,990	"	☐
13,000	- 14,990		☐
15,000	- 16,990		☐
More than	17,000		☐
Not stated			☐

Migration

How long do you intend to stay here

Permanently ☐ Temporarily ☐

if temporarily, for how many months?

Previous place of abodeand birthplace. Give full address,

Town .....village .....

Do you know anyone from your tribe or village who has, like you,

left his or her place of abode? Yes ☐ No ☐

Why did you leave your original place of abode (birthplace) ?

Explain

1 .....

2 .....

3 .....

4 .....

For what reasons do you think your relatives or acquaintances migrated from village to city?

.....

For what reason did the rest of your family remain in the village?

.....

How long have you been living in this area?

Less than 5 years	☐
5 - 10 years	☐
10 - 15 years	☐
15 - 20 years	☐
20 - 25 years	☐
25 - 30 years	☐
30 - 35 years	☐
35 - 40 years	☐
More than 40 years	☐
Not stated	☐

Place of abode prior to migrating to this area.

Capital of Ostan .....Shahrestan .....village .....

Place of abode in Tabriz prior to arrival in squatter settlement

Street ..... lane .....unspecified .....

Who assisted you in your migration to the town?

Family ☐

Friends ☐

Fellow villagers ☐

Others ☐

Local organization ☐

Not stated ☐

Did you migrate to Tabriz alone or with members of your family (wife, children etc.)

Alone ☐ With members of family ☐

Characteristics of Housing

Age of building .....

Number of occupants .....

Number of occupants under 10 years of age .....

Do the following family members live with you?

Father ☐ Mother ☐

Father in law ☐ Mother in law ☐

Do any of your close relatives live in this area

Yes ☐ No ☐

If not, where do they live?

Tabriz ☐ Elsewhere ☐

Reasons for choosing present dwelling place

Main reason .....Other reasons .....

What is the type of your dwelling?

Building (unbaked brick, mud, brick, cement) ☐

Shack (leaves, straw) ☐

Hut (tin,cardboard, wood) ☐

Tent (ordinary tent) ☐

Other (to be specified) ☐

Do you own or rent your dwelling?

Own ☐

Rent ☐

Pay no rent ☐

Not stated ☐

If rented, amount of rent per month.

If owned, price of purchase.

Area of plot

Building .....sq. m.

Yard ..... "

Walled ☐

Unwalled ☐

Number of rooms

Living room

Store room

Type of fuel used at home

Oil ☐

Gas ☐

Wood or charcoal ☐

Cowdung ☐

Combination of the above ☐

Other types ☐

Not stated ☐

Where does your family wash?

At home in private shower ☐

Public baths ☐

Source of washing and drinking water

Public well ☐ River or stream ☐

Communal well ☐ Other sources ☐

Communal tap ☐ Not stated ☐

Do you have access to a sewerage system

Yes ☐ No ☐

Appendix B

Number and per cent of sampled squatter households of Tabriz from Shahrestans of East Azarbayejan Ostan by distance, 1982.

Shahrestan	Subordinate region	No. of Households	Percent	Distance from Tabriz in km.
	Ahar	730	57.2	86
Ahar	Kaleybar	120	9.4	131
	Tabriz	76	6.0	-
	Heris	25	2.0	91
	Osku	19	1.5	33
	Shabestar	6	0.5	62
Tabriz	Sufiyan	9	0.7	33
	Sardrud	10	0.7	13
	Azarshahr	7	0.5	55
	Bostanabad	17	1.3	60
Hastrud	Saraskand	61	4.7	123
Marand	Marand	58	4.5	67
Moghan	Moghan	48	3.8	340
Sarab	Sarab	40	3.1	128
Maragheh	Maragheh	20	1.6	140
	Bonab	5	0.4	130
Meshkinshahr	Meshkinshahr	6	0.5	149
Ardabil	Ardabil	3	0.2	222
Mianeh	Mianeh	3	0.2	173
Total*		1,263	99.1	

* 10 Households (0.75 per cent) were from outside Ostan, and the area of origin of 2 Households (0.15 per cent) was not specified.

Source : Fieldwork.

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